THE DESIGNING AND BUILDING OF TWO LINNEBACH PROJECTORS FOR
A READERS' THEATRE PRODUCTION OF A WEST WIND RISES

by

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INTRODUCTION

The purpose of this thesis is to demonstrate the writer's knowledge of theatre practice, and his ability to use it in mounting a theatrical production. His emphasis in graduate study has been on the technical aspects of theatre. Because of this, he chose for his thesis production the narrative poem, A West Wind Rises, to be presented in a Readers' Theatre style. This style, because of its simplicity of stage direction, lent itself more to technical emphasis than most plays. The production provided an opportunity to demonstrate the results of the design and building of two Linnebach projectors and nine slides. The succeeding parts of this thesis are a description of the work done on the projectors and slides, and a description of the other aspects of the production as outlined in the table of contents.

THE DESIGN AND BUILDING OF TWO LINNEBACH PROJECTORS AND SLIDES

Description of the Project

The idea to design and build a Linnebach projector came through an evolutionary process. The major professor first suggested that research be done on finding new source lamps for Linnebach projectors. While work was being done on this problem, it was decided that it would be to advantage to use any new-found lamps in a practical situation, so a production thesis was planned. The production was to provide an opportunity to show the results of the lamp research. After further consideration, and due to the fact that the school had no Linnebach projector in which any new source lamps could be used, the thesis was
expanded to include the design and building of two Linnebach projectors for the production. These then could be used by the school in the future. To complete the process, of course, it was necessary that slides be made for the projectors and painted for the production.

The solution of the simple direct-ray projection process, in this case, started out with the search for a better light source, then encompassed the design of a projector around that source, and finally, the making of slides for a production. The following description of the work done on the project is organized in this order.

Lamp Sources

This project started as a search for possible new or better light sources for Linnebach projectors. The first step taken in the investigation was to establish criteria by which the various lamps could be evaluated. The list of criteria compiled and used by this investigator is as follows:

1. The source must be able to be dimmed. (This rules out all arc sources, open or enclosed.)
2. The smaller the filament area, the better the picture definition will be (see Plate I for filament diagrams and comparisons).
3. The lamps considered must be 1000 watts. (It was decided that this wattage would probably encompass most of the demands of educational theatre stages, and would be a good limiting factor in the investigation.)
4. The more desirable lamps have the highest direct ratio between wattage used and lumen output.
5. The higher the color temperature, the better the color reproduction will be.
6. The most economical relationship between hours of lamp-life and lumen output is desirable.
7. Burning position and size of lamp may be important factors if they are greatly different from the T-bulbs normally used.
8. The lamp must have a base that has a positive-positioning structure (see Plate I).

With these criteria formulated, the investigator proceeded to determine what lamps had been used in this type of projector before. To limit the scope of the investigation, the assumption was made that the newer lamps would better meet the established criteria. Therefore, 1950 was selected as a starting date for listing lamps that had been previously used.

Those lamps that were reported to have been used after this date are listed below:

1. 6 volt-18 ampere lamp with a small filament
2. G- or T-bulbs, 250-2000 watt incandescent, C-13 or C-13D filament
3. 12 volt-420 watt, C-2V filament
4. 2100 watt-60 volt
5. 420025 (12 volt-100 hour life)
6. 1000 watt, T20, C-13D
7. 2000 watt, G-48, C-13D

1 W. Oren Parker and Harvey K. Smith, Scene Design and Stage Lighting (New York, 1963), p. 299.
4 Payne, p. 82.
5 Payne, p. 84.
6 Kliegl Brothers, Stage Lighting Equipment, Catalog 027-5, 1959, p. 64.
The surprisingly low number of entries on this list is due to the fact that almost every reference that mentioned Linnebach's said only that the projectors used a concentrated light source, and gave no specifications.

After gathering this information, the next step was to find specifications about any different or new sources that might be better than the old ones. Letters were written to major lamp companies that were listed in the Thomas Register of American Manufacturers. The names and addresses of these companies are given below:

General Electric Company
Lamp Department
Mela Park
Cleveland, 12 Ohio

Westinghouse Electrical Corporation
Lamp Division
Bloomfield, New Jersey

Sylvania Lighting Products
60 Boston Street
Salem, Massachusetts

Radiant Lamp Corporation
Bank Street
Hightstown, New Jersey

Western Union Telegraph Company
Development and Research Department
Electronics Research Division
Water Mill, L. I., New York

Information was requested from these sources about lamps they manufactured that might meet the established criteria. All of the companies replied with at least a copy of their lamp catalogs. Entries were made on a comparison chart of each lamp that a company specifically recommended.

or that appeared to the writer to be a good possibility. General Electric, Sylvania, Westinghouse, and Radiant have entries on the chart. One other source of information about lamps was the Illuminating Engineering Society Handbook. It listed all lamps of all manufacturers with complete specifications. Some lamps from this source were also included on the comparison chart. This chart is reproduced on Plate II. Upon examination of this chart, one lamp stood out as superior in several categories. That lamp was the 1000 watt quartz-iodine of Sylvania. The published data concerning this lamp is seen on Plate II.

In the midst of this research, (December, 1964), the writer attended the Speech Association of America Annual Convention in Chicago. At this convention Kliegl Brothers introduced and displayed for the first time a new, complete line of lighting instruments—the "Quartz-Line". The writer talked with Mr. Ned Bowman, one of Kliegl's consultants, and he explained the new instruments and lamps. Mr. Bowman and all the Kliegl personnel were very enthusiastic about the new lamp. The company had just spent several hundred thousand dollars producing this line of instruments that used the quartz-halogen lamp. These representatives said that they, and the company, felt this would be the lamp for theatre lighting in the near future. Certain qualities or attributes that they felt made it superior are listed here, because they are not apparent on the chart of comparison.

1. The ability of the lamp to burn in any position greatly reduces many problems of focusing and bulb stocking.

2. The iodine cycle in the lamp keeps the bulb free of blackening throughout its life.

3. The coiled-coil filament is of a different shape than the bi-plane coiled filament, and has a more even area of emission than the old type. It is also more efficient than the old filament—more lumens per square centimeter.

4. The lamp has a different type of base, which, while it may not be superior to the prefocus base, is at least as positive and simpler to operate. The new base is a rectangular recessed single contact.

5. The dimming curve is identical with conventional tungsten lamps.

6. The lamp is mechanically stronger and more resistant to damage in handling.

7. The lamp has a lamp-life five to ten times longer than that of conventional tungsten filament lamps.

On the basis of this information and that presented on the comparison chart, the Sylvania 1000 watt quartz-iodine (1000T6Q/RCL) lamp was chosen for the projectors. The two basic reasons for this decision were: first, this lamp had, as far as it can be determined, never been used in this application, therefore this was an opportunity to use the new product and report the findings as an experiment; second, after studying the chart of comparison and considering the previously mentioned advantages, this lamp indeed seemed to be the best lamp available. The advantages of the bulb that were adduced by this writer from the chart are listed below:

1. The burning position (any) is versatile.

2. The relative hours of life (2000) compare very favorably with a maximum of 200 for any other lamps.

3. The color temperature curve is very straight.

4. The cost comparison with other bulbs is good, when compared to hours of life.

5. The construction of the filament and its smaller area are superior when compared to even the C-13D filament. It might be noted here
that the shapes of the two filaments differ greatly (see Plate I). The quartz filament (CC-8) is 1.125 inches long by .235 inches wide in the 1000 watt size (.26^2 square inches). The C-13D filament for a 1000 watt lamp is approximately .5 inches by .6 inches (.3 square inches). This is approximately 16% more than in the quartz filament. The rectangular shape of the CC-8 filament, however, is the main consideration in the projection situation. The question to be answered is whether the projected image will be blurred on the horizontal lines and distinct on the vertical, or vice-versa, because of the filament shape. The writer felt that this shape could be used to great advantage in many circumstances, if proper adjustment of the lamp was made possible.

The decision having been made, an order for two quartz-iodine lamps and holders was placed with Sylvania. When the company found that the lamps were being used for experimental work, the Consumer Research Department supplied, without charge, two lamps and two sets of holders for this project. The writer would like to take this opportunity to thank Sylvania Lamp Division for their help and cooperation.

**The Projector Housing**

Having decided upon a lamp to use, the next step in the project was to design a projector to house the lamp and to hold slides in proper relation to it. Research was conducted to determine what shape such housings had taken in the past, and what formulas might be applicable to their construction.

Letters were sent to major stage lighting companies. These letters yielded only information on two projectors, those from Century Lighting Company and Kliegl Brothers. Plate VI contains reproductions of the material received from these two companies. The similarity of these two projectors should be noted.

Next the literature on Linnebach projectors was reviewed. It was found that all sources stated or intimated that projectors are, or should
be, tailored to fit the particular situation in which they are to be used. That is, they should employ the same shape slides as the shape of the surface on which they are to project. The shape of the slide determines the shape of the projector itself. Examples of some shapes of projectors that have been used are seen in Plate VI. The reason that tailored designing of projectors is the best method, and how it aids in the elimination of distortion is explained by Sydney Litwack:

There is no limitation to the shape or form the instrument takes, although its most common form is a funnel-like arrangement which lines up the center of the light source and that of the slide. Other shapes are used for specific purposes, such as lighting cycloramas, or specific locations for projection due to desirable angle or limited throw to the backdrop or screen.¹

There are a number of techniques for correcting distortion in the projected image. One approach is to distort the slide itself to correspond with the shape of the receiving surface. This can work very well when the axis of projection is still perpendicular to the surface. . . ²

Edward Kyvig also recommends tailored designing of projectors in his thesis, "A Technique for the Elimination of Distortion from Projected Images in Stage Lighting."³

Because the projectors were to be constructed as a part of this project, and because it was suggested by most writers that tailor-made projectors are the most satisfactory, these were tailor-made.

There were several formulas found that are designed to determine the size of slides, the placement of the projectors, or the size of the

¹ Litwack, p. 20.
² Litwack, p. 50.
The simplest and easiest of the formulas found is from Herbert Philippi:

\[
S \left( \text{any one slide dimension} \right) = \frac{s \left( \text{slide distance from lamp} \right)}{I \left( \text{corresponding image dim.} \right)} \cdot \frac{1}{i \left( \text{image distance from slide} \right)}
\]

In using this formula, the dimensions must be in the same units of length (feet, inches, etc.).

Having this formula, the writer proceeded to determine the shape of the projectors. There were several preliminary factors that had to be taken into account. These factors are listed below:

1. When designing the size and shape of the projector, the weight of the material of which it is to be made, and its malleability must be considered. If the weight of the material makes the projector too heavy to be convenient, it is necessary to either diminish the shape of the projector or change the material. If it is impossible to fabricate the shape of the projector from the material chosen, the shape or the material again must be changed.

2. The design of the lamp section of the projector must take into account the size and manuverability of the lamp, and ventilation factors.

3. The slides also have some bearing on the design of the projector, in that their weight and size, as far as handling is concerned, must be considered. The availability of the sizes of the material to be used for the slides must be taken into account. The size of the slides also has a direct bearing on the over-all size of the projector and the problems of masking connected with it. Another factor that must be considered concerning the slides is their over-all size, because it will govern the ratio of the size of the scene on the slide with that which is projected onto the screen. A larger slide allows easier painting of the scene, and greater definition.

4. The last factor that affects the size and shape of the projector has to do with the screen. The questions to be answered are: what is the size of the desired image; what is the level of illumination desired on the screen; and what will be practical proportions for the projection image in other applications?

Keeping all these factors in mind, the following preliminary decisions were made:

1. Sheet metal (.045" aircraft template stock) was chosen for the housing material. It was chosen because of its heat-transfer qualities, its workability with standard tools, and its ruggedness to withstand continued use. The gauge was chosen after trial-and-error experimentation by the writer, to determine weight factors and workability versus strength.

2. Plexiglas was chosen for the slides for reasons that are discussed fully in the section on slides (see page 12). The approximate size of the slides was governed by comparison with the slides used by the Century (18" X 20") and the Kliegl (24\(\frac{3}{4}\)" X 24\(\frac{3}{4}\)" or 28\(\frac{3}{8}\)" X 40\(\frac{3}{8}\)") projectors (see Plate VI).

The next step in the design of the projector housing was to determine the size of the image desired, and the length of throw that was possible for this production. The size of the image was calculated to be 15' X 28', and the length of the throw to be 10', by reference to the ground plan and the side view of the stage (Plate XV). After this was done, simplified top and side layouts of the stage were made with the probable placement of the lamp and the screen indicated. From these layouts, the projector was designed within the limitations stated earlier in this discussion. The drawings for this step in the process are also on Plate XV.

The illumination level was determined to be satisfactory for a projector distance of 10', by a trial set-up of similar circumstances as those to be used during the production.

As was stated before, the approximate size and proportions of the slides were partially governed by those of the manufactured projectors. The proportions that were necessary for this production were 15:28. At a 10:1 ratio of screen to slide and slide to lamp, the size of the slides would be 15" X 28". This compared favorably with the slides mentioned
above. The nearest size in which the chosen material for the slides was available was 18" X 36". It was decided that in order not to waste the excess material, and because it is easier to mask unused portions of slides than to add necessary size later, the entire 18" X 36" size would be used.

Having determined a basic shape for the front of the housing, concentration was placed on the lamp section. It was decided that for complete flexibility of lamp usage, provision for three holders should be made in the projectors. The drawing showing the detail of their placement is seen on Plate VI. These three holders provide for wattages from 500 to 2000 with the same light center. The design of this part of the projector, therefore, was determined by the placement of those lamps and holders. Ventilation was provided for, by drilling a series of holes in the top and bottom of this section and supplying baffles. Details of this can also be seen on Plate VI.

One final part of the projector that needs to be explained here is the holder that was manufactured for the quartz lamp. It has been suggested by Litwack\(^1\) and Kyvig\(^2\) that the movement of the lamp within the projector may be of benefit in focusing the projector for the elimination of distortion. Because of this, a universal-joint type of holder was designed and built to allow fine adjustment of the quartz lamp. Because the lamp may be burned in any position, this device is pivoted on the rear of the projector at a point horizontal to the light center. This

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1 Litwack, p. 22.
2 Kyvig, p. 21.
allows the elongated filament to be placed parallel to the slide, either horizontal or vertical, in order to permit variation in definition. The device also allows vertical and horizontal adjustment of the lamp of approximately five inches total, in each direction. The pictures on Plate VII show this holder in various positions. An exploded view of this device is also shown on the same plate.

Various views of the finished projector are shown on Plate VII and working drawings with dimensions are on Plate VI. Lists of materials and tools used in the construction of the projectors are also on Plate VIII.

The Slides

The first and most important consideration in regard to the slides is the material on which the scenes are to be painted. In the course of my research the materials most often suggested for use as slides were glass and clear acetate. Mr. Litwack says these materials are "... those that have been used by practicing technicians, and have been found to be within the limits of economy, practicality, and flexibility."¹ Because of this, and because the design of the projectors for this project required a relatively rigid slide material, comparisons of the advantages and disadvantages of these two materials were made.

The factors of light transmittance, refraction, dispersion, and haze are important in the effectiveness of slide materials. However, after reference to a chart stating the optical properties of acetate (see Plate IX), and a practical in-hand comparison of it with glass, it

¹ Litwack, p. 46.
was concluded by this writer that, for stage purposes there are no significant differences in the optical properties of the two materials.

Other properties that are of concern in slide selection are mechanical and thermal. Again, reference was made to the chart on Plate IX and simple practical experiments were conducted. On the basis of this information it was concluded that acetate would be more practical mechanically because of its extremely high flexural and impact strength (resistance to breakage). It was also concluded that acetate would withstand the temperature to which it would be subjected in these projectors. That temperature was found to be about 100°F, by placing a piece of acetate in the projector and then measuring its temperature. As stated in the chart mentioned above, the acetate’s heat distortion temperature is 190°F at 66 p.s.i., therefore the projector application was well within the safe range.

In the above considerations, the only appreciable difference found between glass and acetate was the high impact strength of acetate. Three more factors that recommend the use of acetate are its weight, price, and workability. The weight of acetate is approximately 45% that of plate glass of the same thickness. It may be noted here, too, that generally a glass slide twice the thickness of acetate must be used to obtain approximately the same degree of rigidness. For instance, 1/8" acetate was used for the slides for this project, and the minimum thickness of manufactured glass slides is 1/4". This would mean that glass slides of similar flexural strength would weigh four times more than those of acetate. The price of acetate, too, is much lower than that of glass. For this project, the slide material was purchased from Polycast.
Corporation, Stamford, Connecticut. There were four sheets 36" X 60" (untrimmed = + 2") at a cost of $10.20 each. When the twelve slides were cut from these sheets the cost of each slide was $3.40. Glass slides of similar size were estimated to this writer at costs ranging between $16.60 to $19.80, five to six times more than those of acetate. The workability of acetate, as judged by this writer, has to do with the fact that it can be cut with saws that could be found in any scene shop. It can also be cut into any shape or size with these hand or power saws. Acetate has one disadvantage that glass does not have, however. The fact that acetate can be scratched much more easily than glass is not desirable, but it is partially counteracted by the fact that only large scratches (over 1" long and 1/32" wide) are noticeable on the projection screen. Even these larger scratches can be eliminated by hand-polishing and waxing. Therefore, this disadvantage can be easily overcome, and does not outweigh the advantages previously mentioned.

The four factors that were taken into consideration in the framing of the slides were: adding rigidity to the material, ease of construction, ease of handling, and protection of the slide surfaces. It seemed that all of these requirements were met by the use of wooden frames made of 3/4" X 2 5/8" white pine. These gave rigidity to the slide without adding too much weight. They were easy to construct because of the availability of the material and the ease with which it may be manipulated. The width and thickness add sufficient bulk for easy handling, and offer some protection from dropping and rough treatment. The 1" thickness offers approximately 5/16" clearance on both sides of the slide, between the outside of the frame and the slide surface. This allows easy stacking.
and storage without damage to the slide surface. The detail of the framing can be seen on Plate X.

The final aspect of the slides to be discussed, their painting, includes four parts: inks used, layout, techniques of painting, and pictures of the finished slides. References to seventeen different coloring or opaquing materials or techniques were found that had been used for slides. The criteria that must be applied to any color medium are that: it must be resistant to heat, must be transparent, must not fade, must adhere to the surface, and must be easily applicable. Because of insufficient facilities, funds, or time necessary to experiment with all the possible materials suggested, the writer decided to search locally for a color medium that would meet the established criteria. If some readily available materials were at hand that could possibly be used, it was decided that the convenience of being able to experiment with them and obtain them in desired quantities and colors was sufficient reason to use them. It was hoped that a product different from those mentioned as having been used previously, could be found and reported on. Several kinds of colored inks were tried. The one ink that worked best on these particular slides and for this particular application was felt-tip pen ink. This is an Artone base ink manufactured by Estorbrook Pen Company, Camden, New Jersey. This ink was not mentioned by other sources as having been used before. It has good flowing qualities and can be brushed on very satisfactorily. It may be thinned down with acetone, a readily available solvent. This solvent will also clean the brushes and slides after use, and erase mistakes made in painting. The ink dries very quickly when applied in thin coats and is available in eleven
colors at most office supply stores.

The next step in the slide construction was the making of a grid for establishing vertical and horizontal lines on the slide, that would be vertical and horizontal when projected on the screen. This was done by a simple trial-and-error process of marking two foot intervals on the edges of the screen, placing the projector in its proper position, inserting a slide in the projector, and then drawing on the slide, in grease pencil, lines that matched those imaginary horizontal and vertical lines on the screen. This grid was used only as a guide to proportions, since no distinct vertical or horizontal lines were used in the scenes for the production.

Water color drawings of each of the slide scenes were painted prior to laying out the slides. With these as guides, the grid was placed under each slide, and painting was begun. A small piece of acetate was used for color sampling. A base coat of the background color was then brushed on the entire slide. Spaces that required white or lighter color penetration were wiped clean with cotton swabs and acetone. Lighter colors were then applied to these spaces or detail added such as in Fig. 2, Plate XI. Darker areas of color were added on top of the base coat. Throughout this entire process the projector and screen were set up, and the slides were constantly put in the projector to check color and composition. The results of this work are seen in the pictures on Plate XI. Unfortunately, the color pictures of the production did not result in clear prints, but some results can be seen on Plate XXIII.
Conclusions

The conclusions that may be made from the work on this project with the Sylvania iodine quartz lamp are listed below:

1. The Sylvania iodine quartz lamp has several physical advantages over other tungsten filament lamps commonly used for Linnebach projectors:
   a. The iodine cycle keeps the bulb free from blackening during its entire life.
   b. The built-in fusing offers added protection in electrical circuits.
   c. The over-all filament area of the lamp is approximately 18% smaller than the C-13D filament most often used in Linnebach projection.
   d. The ability of the lamp to burn in any position offers greater flexibility in usage and application.
   e. The color temperature curve has a less rapid decrease, as the voltage decreases, than a standard tungsten filament lamp.
   f. The hours of life rating is three to ten times that of standard tungsten filament lamps of similar lumen output.
   g. The size of the quartz lamp (T6) allows easier handling and storage.
   h. The quartz envelope is more rugged and durable than those of standard lamps.

2. The shape of the Sylvania iodine quartz filament is rectangular, as opposed to the virtually square shape of a C-13D filament.
This rectangular shape can be used to advantage to vary the definition along either axis of the projection. Definition is approximately four times greater on the axis parallel to the filament, than on the one vertical to it. If this factor is kept in mind when designing slides for projection, it can be used to advantage in obtaining the desired effect.

The conclusions concerning the housing are stated in the form of suggestions to persons planning to build projectors.

1. Tailor-made projectors are probably the most satisfactory and least expensive projectors to have. They will perform more effectively if they are built around the specific projection situation in which they are to be used. If caution is exercised, they can be made very inexpensively. Two projectors for this project cost only $87.09 (less lamps), as opposed to $150.00 for the least expensive commercial projector found.

2. A multiple lamp capability in a projector makes it more flexible. Care taken in designing the housing can provide for lamp holders that will give a range of 2000 watts, and allow for three sizes and types of filaments, as was done in this project.

3. This writer feels that the greater the maneuverability of the lamp within the housing, the more flexible the instrument will be. Although maximum maneuverability of the lamp was not designed for the projectors in this project, that movement was obtained proved to be of great value in focusing and placement of the instruments.

The conclusions that were drawn about the slides are as follows:
1. Clear acetate sheets were used for the slides in this project for several reasons:
   a. Acetate is about six times less expensive than glass of the same size and strength.
   b. Acetate is lighter in weight and much less likely to fracture than glass.
   c. Acetate is more easily workable, yet has similar mechanical and optical properties to those of glass.

   It must be understood that these conclusions were made by this writer after investigations that might be made by any theatre technician toward the solution of a practical problem. In general, no research or testing facilities were used that would not be available to most theatre persons wishing to duplicate the instruments or test the materials that have been described in this project.

THE PRODUCTION

The Director's Approach to the Production

The purposes of the production part of this thesis were thought by the writer to be three: the first purpose was to provide a laboratory for use of the new quartz lamp in a Linnebach projector; the second purpose was to demonstrate the writer's ability to apply his knowledge of theatre to the production situation; third, because this production was sponsored by the K-State Players and the Department of Speech, it was necessary that it provide an educational experience for the students that worked on it, and a cultural experience for the audience. With these goals in mind the writer proceeded to plan the production.
The first step was the selection of a script and a style of production. For reasons to be discussed below, *A West Wind Rises*, a long narrative poem, was chosen rather than a play. It was felt by the writer that since this thesis was comprised of two parts, it was best not to attempt a conventional stage production in conjunction with the Linnebach project. A production that would involve simplicity of setting elements and would not give rise to complicated directing or acting problems, would allow the time needed for both parts of the thesis. At the same time, it would not detract from the over-all effect desired. The writer felt that a Readers' Theatre style of production could be tailored to fit the circumstances mentioned above. The Readers' Theatre style is similar to those which are known as readings, oral readings, or poetry readings. This writer's concept of Readers' Theatre is that it is the oral interpretation of a piece of literature written in a non-dramatic style, and presented in a formalistic setting. The writer felt that this would be an inexpensive, yet effective form of presentation for literature with dramatic qualities. This form therefore, seemed to be well suited to fulfilling the purposes and conditions stated above, and could be accomplished within the budget allowed for thesis productions.

The choice of *A West Wind Rises* as the poem to be presented was made in light of several factors. First, Bruce Cutler, the author, had been a member of the faculty at Kansas State University from 1955 to 1957, and interest in his work had been shown by the English and Speech Departments. Several people knew of his poem and expressed interest in seeing a presentation of it on the Kansas State University campus. During the spring of 1964, two faculty members, another student, and
this writer presented cuttings from this poem in a reading style. This experience acquainted the writer with the quality and appeal of the poem. He thus became gradually convinced that a Readers' Theatre production of \textit{A West Wind Rises} would best fulfill his needs in a thesis production. It would offer a laboratory situation for the projectors, demonstrate the writer's ability in theatrical production, be an educational and cultural experience, be sufficiently uncomplicated, and be within budgetary limitations.

A brief look at the thematic material of the poem is in order before discussing directing concepts and procedures that were involved in its interpretation and presentation.

Bruce Cutler's narrative poem, \textit{A West Wind Rises}, is a dramatic reconstruction of what happened in a hamlet called Trading Post in Kansas Territory on May 19, 1858. On that day a party of slaveowners and their sympathizers rode in without warning, seized eleven Free State settlers, took them to an isolated spot on the banks of the Marais des Cygnes River, and shot them down. The "Marais des Cygnes Massacre," as it quickly became known, added fuel to the flaming controversy over slavery which culminated in the Civil War.

The story is told in nine parts, each projecting a different point of view. As the narrative unfolds we not only see the immediate drama of the raid but learn much about the past struggles, the hopes and dreams of the "people who lived and died...for the land that one day would be ours."

\textit{A West Wind Rises} partakes of the epic tradition of Benet's \textit{John Brown's Body} and Neihardt's \textit{Cyle of the West}, and deserves a place on the same shelf with them for the quality of its craftsmanship no less than for the stirring story it has to tell.\footnote{\textit{A West Wind Rises} (Nebraska, 1962), Cover Description.}

The author's comments offer additional enlightenment about the structure and tone of the poem:

\ldots I carried the narrative beyond the hard skeleton of fact into the vulnerable tissue of probability; if it is blemished,
lay it to me, the translator, and not to the people who lived and
died—not for the dust of the museum, but for the land that one day
would be ours. ¹

A discerning analysis of the poem was given by Dr. Earl Davis, Head of
the English Department at Kansas State University, in his review of the
production for the Manhattan Mercury. A copy of this review can be seen
on Plate XXI.

Directing Concepts and Procedures

The directing process was a unifying of the poem, the style of
production, and the readers, into a presentational whole. Involved in
this process was the oral interpretation of the poem. Oral interpretation
of literature is a type of communication. The details of its presentation
may be individual and varied. After several readings of the poem and
due consideration of the type of literature involved and the production
style, it was decided to present this poem in the following manner.
The readers would memorize their material. They would stand at music
stands with scripts in front of them, but would not read from the
scripts. They would use the techniques of oral interpretation, but
without overt gesturing.

With these conditions in mind the next major step was the division
of the poem into parts for the readers. Being a poem rather than a play,
there were no characters for which people could be cast. It was the
task of the director to read through the poem and decide how many
readers were needed, and to assign each part or parts of the poem to

¹ Bruce Cutler, A West Wind Rises (Nebraska, 1962), p. x.
specific readers. It was decided that four men and two women would be an adequate number to use. Because of the length of the poem, it was thought that memorization of approximately one-sixth of it would be enough to expect of the readers. The factor of audience interest also came into consideration here. Because this was not a play with action, sets, props, and costumes, there was a cultivation of every possibility to simulate action and hold attention. Using four men readers instead of one, it was thought, would create a sense of movement and change which might help in establishing and sustaining interest. Each section of the poem was also subdivided, with all four men reading some part of each of seven sections. Each of the two women read alternate parts of two sections. The complete break-down and division of the poem for the readers can be seen in the prompt script (Appendix B). The parts for each reader were determined on the basis of three factors. The first and most important factor that helped decide where the sections of the poem should be subdivided was that of transition. It was decided that a good way to aid the understanding and interpretation of this material was to make clear the transitions that were inherent within the poem. These transitions consisted of changes of locale, of persons speaking, changes from first person to second person, from narrative to dialogue, from author speaking to first person character speaking, and changes of time. A general rule that was used to promote clarity was to change the reader speaking at each of these transitions. The next factor in the division of the poem was one of tone or feeling. To help add variety to the presentation the plan was to cast a variety of types of readers and voices. While dividing the poem, moods or feelings were noted that
could be better presented by one type of voice or personality than by another. The last factor had to do with visual composition. The position of each reader on the stage, and the order of his speaking were considered. It was thought that a purely random division of parts would be distracting visually, because of spatial incongruity between the readers. An effort was made to have successive passages follow visually along the row of readers and back. For instance, a verbal exchange would be held between two readers next to one another, rather than between two who were separated by a reader not involved in that passage.

With these preliminary decisions made, tryouts were held, a cast was selected, and rehearsals began. Statements of the goals of the rehearsals are included in a succeeding section of the thesis. During the rehearsals, the director was concerned with implementing the principles of good oral interpretation and communicative reading.

The principles that must concern a director of oral reading may be grouped under these headings: stating the meaning, expressing the meaning, visible communication, and audible communication. There are several factors under each of these headings that are involved in analyzing the process of oral interpretation. These factors may be found in any good text on communicative reading. It seems obvious to this writer that attention to all of these factors simultaneously, or even consecutively, is beyond hope or reason as a method of practical direction. For this production the director proceeded on the assumption that many or most of these factors would be satisfactorily presented because of the nature of the literature, and by responsive cast members. He therefore attempted to predict the most obvious difficulties that were likely to occur, and
worked on the solution of these. These problems were word meanings and pronunciations, thought groupings, mood, and rhythm. The satisfactory solution of these problems came through a close understanding and cooperation between the director and the readers. The other aspects of oral interpretation seemed to be adequately accomplished by the readers' close study of the poem and their earnest work for clear and effective communication. The best use of the long list of interpretation principles mentioned above seemed to be in expressing and phrasing suggested changes to the readers that the director felt were necessary for clear and effective understanding by the audience.

This section has given an outline of the direction process, and an explanation of the production style. The succeeding sections discuss the other aspects of the production.

The Readers

Readers for the production were chosen from students who read at open tryouts held on the Kansas State University campus. As was explained earlier, this was not a production in which actors were needed. There were no parts or roles, as in a play, but each reader read many parts in varied styles of writing. The readers were cast for their ability to communicate orally. A feeling of ensemble communication was demanded of the readers for this production. The unity, continuity, and flow of the entire production were of utmost importance, not unlike those in a play, but of a different nature. There were not several characters working or experiencing together, but a group of readers as one unit with one goal—that of interpreting and communicating a work of art.
Because this production was presented in a formalistic manner with no specific characters or roles, the costuming was also formalistic. The writer felt that due to the manner of the presentation and the stature of the material to be presented, a simple and undistracting dress was in order. The men wore black suits, white shirts, black over-hand ties, and black shoes and socks. The women wore black sheath dresses, and black high-heeled shoes.

Three factors influenced the decision to use stage make-up on the readers. First, stage lighting was used on the readers; second, they were silhouetted against the projection; and third, the house was relatively deep. A chart of the make-up used on each reader is included on Plate XIII.

The Settings

A discussion of the settings for the production must be divided into two parts; one, a discussion of the basic formalistic setting, and two, a discussion of the slides that were projected behind the readers. When the term formalistic is used, it refers to a setting that does not suggest a specific locale or place of action, as differentiated from all other realistic or expressive scenery.

Because there was no action on the part of the readers, as is normally a part of dramatic production, it was not necessary to provide an "acting area" or environmental setting. It was therefore decided to merely provide music stands on which the readers placed their books while reading, and chairs to be used when not reading. Since it was necessary to mask the Linnebach projectors, platforms were placed on the stage on which the readers stood. The chairs were placed on higher
platforms at each side of the stage, four chairs stage right for the men, and two stage left, for the women. A ground plan of the stage can be seen on Plate XV. A plan of the entire theatre is on Plate XIV. All of the platforms were painted a neutral grey on the front, to blend with the curtains on the stage. The tops were painted black to reduce light reflection that might have washed out the projections. A ground row of rolling hills was placed on the back of the platforms to suggest the Kansas landscape and establish a foreground for the projection of sky scenes.

There were nine projections, one for each part of the poem. The projected scenes helped the production in many ways. First, by the use of color the emotional impact of each of the scenes was heightened. The writer tried to determine the emotional intensity or feeling of each of the scenes, and tried to correlate a color that would carry that feeling. After much deliberation it was decided that projections of cloud formations or skies could be used to best perform this function. A wide variety of shapes, colors, and intensities could be obtained in this way.

The slide for the first scene, The Dispatch, was a background of very pale blue, with horizontal clouds, over which the words "A West Wind Rises" were seen in black letters. It was hoped that this would help portray the idea of newspaper print, or a dispatch. The second scene was the exposition and the initial action. This scene had a deep blue sky with rising cumulus clouds, suggesting an unstable atmosphere. The next scene was the meeting at Jackson's store. This was told from the raiders' point of view, and related the planning of the raid. A
gathering storm in black and grey was used for this slide, with the sun disappearing behind the clouds. These men embodied the gathering storm, and were destroying all hope that the issue of slavery could be settled peacefully. "Miriam Nekell's Letter to Her Mother" reported on the raid, and was the first description of the raiders as they appeared to their victims. This scene was again in very dark colors, with menacing cloud formations. The first hint of blood was suggested by a purple hue among the clouds. By the fifth part, the true character of the raiders and raid are evident, and a very dark storm with heavy clouds was used to project the feeling. Part six is "The Marriage of Lily Stillwell," which does not fit well into this visual scheme of dramatic presentation. The only thing that could be done with the background was to project the mood of this scene only, and resume the progression of the storm (the raid) in part seven. The predominant feeling that was projected by the script for this scene was the feeling of the unrelenting Kansas heat, so an all-yellow sky with a white sun was used. The next scene was "The Battle at Snyder's Forge." This scene resumed the storm sequence. Red and purple were added to this slide for an increased feeling of violence. The eighth scene, "The Massacre," was both the climax and end of the storm, and was portrayed with lingering black clouds against a violent red sky. The last scene took place five years after the massacre, and was the denouement of the poem. Once again the atmosphere was serene. As the author of the poem writes, there were "the sweep of mare's tails in the sky." Pictures of all the scenes can be seen on Plate X.
The Lighting

The lighting for the production was uncomplicated. Normal forty-five degree lighting from each side of the actor was used. Rosco special lavender #242 was used from the stage right stand, and Rosco light straw #205 was used from the stage left stand. The only problem that arose was in the necessity of keeping the light from falling on the projection screen. This was easily solved by the proper placement of the light stands and top-hats used on the fresnels. A light plot, instrument schedule, and cue sheet are found on Plates XVI, XVII, and XVIII, respectively.

The Sound

The music for the production was composed by Joshua Missal of Wichita, Kansas. The complete score, with cues, is reproduced in Appendix C. The music was played live for the production. Janice Hicks played piano and Bernie Cohen played drums.

The Prompt Script

The prompt script is an exact typed copy of the poem as it was published by the University of Nebraska Press. All sound and lighting cues are included. The script is Appendix A, with the key preceding it.

Rehearsal Data

The following is a description of the procedure and goals for the rehearsals of the readers. At the first rehearsal there were three things accomplished: first, the readers were told more of the background of
the poem and of the author, and given a brief sketch of the plot or story; next, the director went through the script and had everyone make note of his part; last, a read-through of the script was completed with everyone reading his assigned part.

During approximately the first two weeks of rehearsal the readers were divided, the men rehearsing three evenings a week and the women rehearsing the other two afternoons. During these sessions there was discussion about over-all concepts that would govern such things as pace, rhythm, volume, intention, and build. There were also discussions as to the meanings of specific parts, phrases or words. There was concentration on the poem itself, rather than its communication. The director felt that it was necessary for the readers to become familiar with the poem, its symbolism, images, mood, thought sequences, etc., before they could communicate it effectively to an audience.

During the next week of rehearsal, emphasis began to shift to the mechanics of interpretation. These included such things as pronunciation, enunciation, pitch, tone, rhythm, variation, and intention. These were factors that the director felt encompassed the major aspects of oral interpretation and were most useful in discussing the variable elements of vocal manipulation. Much of this work came naturally by the actors' mental interpretation of the material. They could then let their voices express this meaning in their own manner. Changes were suggested by the director after first listening to the reading to see if it made sense as it was presented, and if it agreed with his interpretation of the material. There being an almost infinite number of variables involved in the vocal expression of language, one is obliged to rely on his own
judgment as a director, to make almost intuitive decisions about what is right or wrong.

The fourth week of rehearsal was devoted almost exclusively to continuity. The rehearsal pianist came to every rehearsal and played the entire score with the readers. The music helped greatly to establish mood and transitions. Complete run-throughs, without stops, were held. Notes were given only at the end of the reading. Memorization was also stressed more during this period. Special attention was given to pace, build, and intention.

During the last week, dress rehearsals, work was done on details, individual problems, and polishing. A rehearsal schedule is included on Plate XIX.

The Performance

The performances were given on February 18, 19, and 20, 1965, at 8:30 p.m., in Williams Auditorium, on the Kansas State University campus. Admission was 50¢ for all persons. A copy of the program is included on Plate XX. Pictures of the production are on Plate XXIII, and reproductions of the reviews in the K-State Collegian and Manhattan Mercury are on Plate XXI. It might be mentioned that Mr. Cutler attended the opening night performance and praised the efforts of those who worked on the production.

The Budget

The budget for the production was $150.00 plus income from the box office. A complete break-down of expenditures and income for the production are on Plate XXII.
APPENDIX A

The plates referred to in the body of the thesis.
EXPLANATION OF PLATE I*

Fig. 1. Typical incandescent lamp filament constructions and the most common burning positions.

Fig. 2. Typical bulb shapes and designations.

Fig. 3. Common lamp bases.

Fig. 1.

Fig. 2.
EXPLANATION OF PLATE II

The Chart of Lamp Comparisons

Abbreviations used on the chart:

BURN. POS. = burning position
M.O.L. = maximum over-all length
L.C.L. = light center length
COLOR TEMP. °K = color temperature in degrees Kelvin
Med. Pf. = medium prefocus base
Mog. Pf. = mogul prefocus base
Med. Bip. = medium bipost base
Mog. Bip. = mogul bipost base
R.S.C. = recessed single contact base
Rect. R.S.C. = rectangular recessed single contact base
Sktd. = skirted
BED = burn base down
BBU = burn base up
ANY = burn in any position

Sylvania = Sylvania Lighting Products Bulletin No. 64
Radiant = Radiant Lamp Corporation Bulletin 04 115
Westinghouse = Westinghouse Lamp Division, Lamp Price Schedule S-404
I.E.S. = Illuminating Engineering Society Handbook, 3rd Ed., p. 8-77
<table>
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<td>T-20</td>
<td>Med. Pt. BBD</td>
<td>11.75</td>
<td>C-13 5 3/4</td>
<td>2 3/16</td>
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<td>19,000</td>
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<td>T-12</td>
<td>Med. Pt. Sktd. BBD</td>
<td>12.65</td>
<td>C-13D 5 3/4</td>
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<td>T-24</td>
<td>Mog. Bip. BBU</td>
<td>30.25</td>
<td>C-13D 10</td>
<td>6 1/2</td>
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<td>22,500</td>
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<td>C-13 9 3/8</td>
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<td>23,500</td>
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<td>Med. Bip. BBU</td>
<td>14.00</td>
<td>C-13 9 1/2</td>
<td>5 1/2</td>
<td>1000</td>
<td>29,000</td>
<td>2850</td>
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<td>Med. Bip. BBD</td>
<td>8.50</td>
<td>C-13 9 1/2</td>
<td>4</td>
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<td>C-13 8 7/16</td>
<td>3 15/16</td>
<td>50</td>
<td>28,000</td>
<td>3200</td>
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<td>21,500</td>
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EXPLANATION OF PLATE III

Fig. 1. Sylvania iodine quartz lamp data and specifications, Bulletin 0-232.
Fig. 2. Sylvania iodine quartz lamp characteristics.
Fig. 3. Sylvania iodine quartz lamp holder, Bulletin 0-288.
Fig. 4. Sylvania iodine quartz lamp holder specifications.
# Plate III

## Fig. 1.

### 1000T6Q/RCL Iodine Quartz Lamp Data

**Iodine Quartz**  
Bulletin O-202

---

#### All Dimensions in Inches

<table>
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<th>Specification</th>
<th>Detail</th>
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<tr>
<td>Nom. Fil. Length</td>
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<tr>
<td>Nom. Lip.</td>
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<tr>
<td>Max. Lip.</td>
<td>.370</td>
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<tr>
<td>Contact Length</td>
<td>5.375 ± .070</td>
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<tr>
<td>Fuse Link</td>
<td>.080 Max.</td>
</tr>
<tr>
<td>3/32 R. Silver Plated Contact</td>
<td>.625 Max.</td>
</tr>
<tr>
<td>Rectangular Ceramic End Cap</td>
<td>.820 Max.</td>
</tr>
<tr>
<td>Avg. Life Hours (Normal Service Conditions — 120 V.)</td>
<td>2000</td>
</tr>
<tr>
<td>Lamp Class &amp; Filament Type</td>
<td>RECT. R.S.C.</td>
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### Specifications

#### Ordering Abbreviation

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<th>1000T6Q/RCL</th>
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<tr>
<td>1000T6Q/RCL</td>
<td>1000</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Sylvania</td>
</tr>
<tr>
<td>Configuration</td>
<td>1000T6Q/RCL</td>
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#### Electrical

- **Watts (Nominal)**: 1000
- **Volts (Rated)**: 120
- **Fusing**: Internal

#### Optical

- **Color Temp. (Approx.)**: 3000°K
- **Lumens (Rated)**: 19,000
- **Burning Position**: Any
- **Bulb Finish**: Clear

#### Rated Avg. Life

- **Hours (Normal Service Conditions — 120 V.)**: 2000

#### Physical

- **Bulb Material**: Quartz
- **Bulb Type**: T6
- **Bulb Wall Temp. (Minimum)**: 250°C
- **Moly Seal Temp. (Maximum)**: 350°C
- **Overall Length (Max. Inches)**: 5.605
- **Lamp Class & Filament Type**: C, CC-8
- **Base Type (Rectangular Recessed Single Contact)**: RECT. R.S.C.

#### Lampholder

- **Iodine Quartz Lampholder**: No. S3
NOTE: Lamp life is reduced as voltage is increased above nominal rating.
IODINE QUARTZ LAMPHOLDER
TYPE NO. S3

Fig. 3.

X = Nominal Contact Length of Lamp
less 0.562" ± .015"

All Dimensions Given in Inches
See Specifications on Reverse Side
PLATE III cont.

Fig. 4.

IODINE QUARTZ LAMPHOLDER
TYPE NO. S3

SPECIFICATIONS

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<tr>
<td>Ordering Abbreviation</td>
<td>Iodine Quartz Lampholder No. S3</td>
</tr>
<tr>
<td>Maximum Current</td>
<td>10 Amps*</td>
</tr>
<tr>
<td>Maximum Voltage</td>
<td>600V</td>
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<tr>
<td>Maximum Operating Temperature</td>
<td>350°C.</td>
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<tr>
<td>Maximum Contact Deflection</td>
<td>¾”</td>
</tr>
<tr>
<td>Duty Cycle</td>
<td>Intermittent or Continuous</td>
</tr>
<tr>
<td>Use</td>
<td>Indoor or Outdoor</td>
</tr>
<tr>
<td>Lamp Base Type Application</td>
<td>Rectangular Recessed Single Contact (RECT.R.S.C.)</td>
</tr>
<tr>
<td></td>
<td>Also Recessed Single Contact (REC.S.C.)</td>
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<tr>
<td>Socket Material</td>
<td>Steatite</td>
</tr>
<tr>
<td>Contact Material</td>
<td>Silver ball contact on corrosion resistant, high temperature spring material</td>
</tr>
<tr>
<td>Reinforcing Spring Material</td>
<td>“Inconel”</td>
</tr>
<tr>
<td>Mounting Screws</td>
<td>#6-32 corrosion resistant steel</td>
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<tr>
<td>Wire Leads</td>
<td>U.L. Listed, Type SF2, #14 Ga., 600V suitable for 200°C. Service 12” lead length standard. Other lengths and wire types available on special order.</td>
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<tr>
<td>Wire Lead Terminations</td>
<td>Plated brass terminal (#4 screw hole) on spring end; ¼” strip other end.</td>
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</table>

*Higher current rating can be attained with forced cooling.

**Maximum temperature shown above is at rear of contact button. Do not exceed.

Note: On special order this part may be ordered with top ¾” cut off ceramic to allow for forced cooling. Specify Part No. S3A. Assembled sockets are available as samples only. Normal orders are filled unassembled for ease of assembly, unless otherwise requested.

All data subject to change without notice.
EXPLANATION OF PLATE IV

Fig. 1. General Electric iodine cycle lamps available. Excerpt taken from the G.E. Photographic Lamp and Equipment Guide.

Fig. 2. Sylvania Lighting Products iodine quartz lamps available. Excerpt taken from the Sylvania Large Lamp Price Schedule No. 64.
PLATE IV

General Electric Lamps

SPECIFICATIONS (all are iodine cycle lamps)

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<td>Open face movie lights</td>
<td>120</td>
<td>650</td>
<td>½</td>
<td>SCR</td>
<td>3½/8</td>
<td>25</td>
<td>20,000</td>
<td>3400</td>
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<td>Uniflood movie light</td>
<td>120</td>
<td>650</td>
<td>4½</td>
<td>FC</td>
<td>2½/8</td>
<td>16</td>
<td>30,000 C.P.</td>
<td>3400</td>
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<td>Studio Equipment</td>
<td>120</td>
<td>1000</td>
<td>½</td>
<td>SCR</td>
<td>3½/8</td>
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<td>33,000</td>
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<td>800</td>
<td>½</td>
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<td>Studio Equipment</td>
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<td>1000</td>
<td>½</td>
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<td>3½/8</td>
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<td>26,000</td>
<td>3200</td>
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<td>Copy board—Short exposure</td>
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<td>650</td>
<td>½</td>
<td>SCR</td>
<td>3½/8</td>
<td>16</td>
<td>22,000</td>
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<td>Professional type DWY</td>
<td>120</td>
<td>650</td>
<td>½</td>
<td>SCR</td>
<td>3½/8</td>
<td>100</td>
<td>16,500</td>
<td>3200</td>
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<td>FAL</td>
<td>Overhead Projector</td>
<td>120</td>
<td>420</td>
<td>½</td>
<td>SCR</td>
<td>3½/8</td>
<td>75</td>
<td>11,000</td>
<td>3200</td>
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<tr>
<td>FAY</td>
<td>Daylight version of DXK.</td>
<td>120</td>
<td>650</td>
<td>4½</td>
<td>FC</td>
<td>7½/8</td>
<td>16</td>
<td>30,000 C.P.</td>
<td>5000</td>
<td></td>
</tr>
<tr>
<td>FAZ</td>
<td>Wide beam Uniflood</td>
<td>120</td>
<td>650</td>
<td>4½</td>
<td>FC</td>
<td>7½/8</td>
<td>16</td>
<td>9,500 C.P.</td>
<td>3400</td>
<td></td>
</tr>
<tr>
<td>FBJ</td>
<td>Spot beam Uniflood</td>
<td>120</td>
<td>650</td>
<td>4½</td>
<td>FC</td>
<td>7½/8</td>
<td>16</td>
<td>60,000 C.P.</td>
<td>3400</td>
<td></td>
</tr>
</tbody>
</table>

SCR = Single Contact Recessed  FC = Female Contact

SYLVANIA

IODINE QUARTZ

All iodine Quartz Lamps are internally fused and Universal Lamps have rough service construction

<table>
<thead>
<tr>
<th>Watts</th>
<th>Bulb</th>
<th>Base</th>
<th>Volts</th>
<th>Ordering Abbreviation (Except Volts)</th>
<th>List Price</th>
<th>Description</th>
<th>Std. Pkg. Qty.</th>
<th>Class and Fil.</th>
<th>Fluted Hours Life</th>
<th>Approx. Luminos</th>
<th>Contact Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>450</td>
<td>T-4</td>
<td>Rec. S.C.</td>
<td>120</td>
<td>400T4Q/CL</td>
<td>8.95</td>
<td>General Lighting (23, 71)</td>
<td>6</td>
<td>C, C-8</td>
<td>2000</td>
<td>7500</td>
<td>2½/8</td>
</tr>
<tr>
<td>500</td>
<td>T-3</td>
<td>Rec. S.C.</td>
<td>120</td>
<td>500T3Q/CL/U</td>
<td>10.60</td>
<td>Universal Lighting (71)</td>
<td>6</td>
<td>C, C-8</td>
<td>2000</td>
<td>10500</td>
<td>4½</td>
</tr>
<tr>
<td>1500</td>
<td>T-3</td>
<td>Rec. S.C.</td>
<td>200, 240, 277</td>
<td>1500T3Q/CL/U</td>
<td>14.70</td>
<td>Universal Lighting (71)</td>
<td>12</td>
<td>C, C-8</td>
<td>2000</td>
<td>33000</td>
<td>9½</td>
</tr>
</tbody>
</table>

Fig. 1.

Fig. 2.
EXPLANATION OF PLATE V

Fig. 1. Sample shapes of Linnebach projectors.

Fig. 2. Reproduction of the catalog description of Kliegl Brothers’ Linnebach projector.

Fig. 3. Reproduction of the catalog description of the Century Lighting Company’s Linnebach lantern.

Fig. 4. Published specifications of the Century lantern.
Designed for the projection of scenery on rear curtains or similar large flat areas. Desired scene is painted, or otherwise applied, on a glass slide and is then projected on a curtain or back drop without the use of lenses. Based on the shadow box principle and using a single concentrated light source all colors and designs are clearly projected—outlines are slightly diffused producing a soft-toned appearance. All units wired and furnished with 25 feet of stage cable.

No. 2048 — projects a scene 15 feet wide from a 15 foot throw. Takes 24” x 24” glass slide and uses a 1000 watt T20, C13D biplane filament mogul prefocus base lamp.

No. 248 — projects a scene 30 feet wide from a 10 foot throw. Takes a 28” x 40” glass slide and uses a 2100 watt 65 volt mogul bi-post lamp. Unit equipped with a transformer for use on 110 volt A.C. and 25 feet of stage cable.

<table>
<thead>
<tr>
<th>Framed Slides</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2049 — 24½” x 24½” wooden frame with glass slide for unit No. 2048.</td>
</tr>
<tr>
<td>No. 249 — 28½” x 40½” wooden frame with glass slide for unit No. 248.</td>
</tr>
</tbody>
</table>
This unit is named after its famous inventor, Adolph Linnebach. It is a simple form of standard projector using an 18”x20” glass slide or silhouette cut-out. Direct emanation from the concentrated filament projects the bold pattern of the slide as long as its details are larger than the source. The pattern can be colored.

This unit provides the simplest means of projecting a general colored light pattern with a soft edge over a wide area from a 5 to 15 foot distance.

Performance data
2000 watt G-48 Bipost C-13D Filament Lamp

<table>
<thead>
<tr>
<th>Distance to screen (ft)</th>
<th>Illumination of left half of screen (of 24”) at (ft intervals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>18 27 34</td>
</tr>
<tr>
<td></td>
<td>25 44 51</td>
</tr>
<tr>
<td></td>
<td>50 100 134</td>
</tr>
<tr>
<td></td>
<td>70 150 232</td>
</tr>
<tr>
<td></td>
<td>88 180 275</td>
</tr>
<tr>
<td>7.5</td>
<td>8 12 16</td>
</tr>
<tr>
<td></td>
<td>16 20 22</td>
</tr>
<tr>
<td></td>
<td>22 44 60</td>
</tr>
<tr>
<td></td>
<td>32 68 100</td>
</tr>
<tr>
<td></td>
<td>40 84 120</td>
</tr>
<tr>
<td>10</td>
<td>4 7 8</td>
</tr>
<tr>
<td></td>
<td>9 11 13</td>
</tr>
<tr>
<td></td>
<td>12 25 33</td>
</tr>
<tr>
<td></td>
<td>17 36 50</td>
</tr>
<tr>
<td></td>
<td>22 48 69</td>
</tr>
<tr>
<td>15</td>
<td>2 3 4</td>
</tr>
<tr>
<td></td>
<td>4 5 5</td>
</tr>
<tr>
<td></td>
<td>5 11 15</td>
</tr>
<tr>
<td></td>
<td>8 17 25</td>
</tr>
<tr>
<td></td>
<td>10 21 31</td>
</tr>
</tbody>
</table>

Calculations are based on average conditions
*These values are for use with a clear slide and assuming the unit stands on the floor opposite center of screen.
Specifications

This unit shall consist of an approved heat resisting receptacle to accommodate a 1000, 1500, or 2000 watt G-40 or G-48 mogul base lamp, and a 18” x 20” effect carrier frame, in a steel housing not more than 22” high, 20” wide, and 16” deep.

The lamp receptacle shall be permanently mounted, at such an angle that the maximum candlepower output is directed through the center of the effect opening. Adequate ventilation shall be provided through perforations in the housing, light spill being eliminated by metal baffles.

The unit shall be designed to rest upon the floor, and vertical tilting shall be provided through adjustable feet below the effect carrier frame. Three foot asbestos leads shall be provided as standard equipment. Finish shall be flat black overall, and light output shall conform to the performance schedule shown.
EXPLANATION OF PLATE VI

Fig. 1. Orthographic projection of the Linnebach projectors for this project.

Fig. 2. Side view of the projector housing, showing the position of the quartz lamp and the proposed positions of other lamps and holders.
Fig. 1.
Orthographic Projection of a Lindebach Projector showing major dimensions. Scale $\frac{1}{2}'' = 1'$.
SIDE VIEW of Projector showing 2 positions of the Quartz lamp and proposed positions of two other holders and lamps.

Scale \( \frac{3}{8}'' = 1'' \)
EXPLANATION OF PLATE VII

Fig. 1. Front view of the projector housing.
Fig. 2. Back view of the projector housing.
Fig. 3. Side view of the projector housing.
Fig. 4. Side view of the projector housing.
Fig. 5. Housing, showing slide being placed into position.
Fig. 6. Hand rivet press used for constructing the housing.
Fig. 7. Inside of housing, showing quartz holder at light center position.
Fig. 8. Quartz lamp at lowest position.
Fig. 9. Quartz lamp at highest position.
Fig. 10. An exploded view of quartz holder (dim. ref.: lamp = 5\textquotedbl{}).
Fig. 11. Another view of the quartz holder.
EXPLANATION OF PLATE VIII

List 1. The list of materials used for the building of the projectors.
List 2. A list of the tools used in the building of the projectors.
<table>
<thead>
<tr>
<th>List 1</th>
<th>List 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>List of materials for two projectors and slides</strong></td>
<td><strong>List of tools used for construction</strong></td>
</tr>
<tr>
<td>Acetate (.125&quot; - 4 sheets, 36&quot; X 60&quot;)</td>
<td>4&quot; straight edge</td>
</tr>
<tr>
<td>Sheet metal (.045&quot; - 56 sq. ft.)</td>
<td>Scribe</td>
</tr>
<tr>
<td>Pop rivets (200)</td>
<td>6&quot; steel tape</td>
</tr>
<tr>
<td>Strap iron (20' - 3/16&quot; X 3/4&quot;)</td>
<td>Bluing Dykum</td>
</tr>
<tr>
<td>Corner braces (4 ea., 6&quot; X 6&quot; X 1&quot;)</td>
<td>Hand brake</td>
</tr>
<tr>
<td>Machine bolts (6 ea., 3/8&quot; X 1&quot;)</td>
<td>Tin snips</td>
</tr>
<tr>
<td>Machine screws (8 ea., 1/2&quot; X 8-32)</td>
<td>Flat file</td>
</tr>
<tr>
<td>ABS-12 electrical cable (6')</td>
<td>Rat-tail file</td>
</tr>
<tr>
<td>Paint remover (1 qt.)</td>
<td>1/4&quot; electric drill</td>
</tr>
<tr>
<td>Metal primer spray (1 pt.)</td>
<td>3/32&quot;, 1/8&quot;, 1/4&quot;, 3/8&quot; drills</td>
</tr>
<tr>
<td>Flat black enamel spray (6 pts.)</td>
<td>Tap handle</td>
</tr>
<tr>
<td>Electrical take-alls (6)</td>
<td>8-32 tap</td>
</tr>
<tr>
<td>Male parallel-blade connectors (2)</td>
<td>Bench vise</td>
</tr>
<tr>
<td>Wood screws (36 ea., 2&quot; - #9 FH)</td>
<td>Ball-pean hammer</td>
</tr>
<tr>
<td>Lumber (100 running feet of 1&quot; X 3&quot; pine)</td>
<td>Rivet squeeze</td>
</tr>
<tr>
<td></td>
<td>Hack saw</td>
</tr>
<tr>
<td></td>
<td>Table saw</td>
</tr>
</tbody>
</table>
EXPLANATION OF PLATE IX

Fig. 1. A reproduction of the mechanical and optical properties of acrylic resins, published by Dupont.

Fig. 2. A reproduction of the thermal and electrical properties of acrylic resins, published by Dupont.

Fig. 3. A reproduction of the Dupont chart of the chemical resistance of acrylic resins.
# PLATE IX

![Image](https://i.imgur.com/3.png)

## MECHANICAL AND OPTICAL PROPERTIES OF "LUCITE" ACRYLIC RESINS

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>ASTM D-Method</th>
<th>Sheet Extruded from</th>
<th>Sheet Cast from</th>
<th>Reinforced Laminates Cast from</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>&quot;Lucite&quot; 129</td>
<td>&quot;Lucite&quot; 130</td>
<td>&quot;Lucite&quot; 140</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>&quot;Lucite&quot; 145</td>
<td>&quot;Lucite&quot; 147</td>
<td>&quot;Lucite&quot; Acrylic Monomer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;Lucite&quot; Acrylic Syrup</td>
</tr>
<tr>
<td>Mechanical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tensile Strength</td>
<td>psi</td>
<td>638</td>
<td>14,600</td>
<td>14,500</td>
<td>14,500</td>
</tr>
<tr>
<td></td>
<td>-70°F</td>
<td>psi</td>
<td>14,500</td>
<td>14,500</td>
<td>14,500</td>
</tr>
<tr>
<td></td>
<td>73°F</td>
<td>psi</td>
<td>10,000</td>
<td>9,600</td>
<td>10,600</td>
</tr>
<tr>
<td></td>
<td>158°F</td>
<td>psi</td>
<td>4,000</td>
<td>3,500</td>
<td>5,000</td>
</tr>
<tr>
<td>Tensile Elongation</td>
<td>%</td>
<td>630</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>-70°F</td>
<td>%</td>
<td>4</td>
<td>4</td>
<td>4</td>
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<tr>
<td></td>
<td>73°F</td>
<td>%</td>
<td>90</td>
<td>100</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>158°F</td>
<td>%</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Tensile Modulus</td>
<td>psi</td>
<td>638</td>
<td>450,000</td>
<td>400,000</td>
<td>450,000</td>
</tr>
<tr>
<td>Shear Strength</td>
<td>psi</td>
<td>732</td>
<td>9,000</td>
<td>7,500</td>
<td>9,400</td>
</tr>
<tr>
<td>Impact Strength, Notched Izod</td>
<td>ft.lbf./in.</td>
<td>256</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
</tr>
<tr>
<td>Impact Strength, Charpy</td>
<td>ft.lbf.</td>
<td>256</td>
<td>0.3</td>
<td>0.3</td>
<td>0.4</td>
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<tr>
<td>Stiffness</td>
<td>psi</td>
<td>747</td>
<td>410,000</td>
<td>340,000</td>
<td>430,000</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>psi</td>
<td>790</td>
<td>15,000</td>
<td>15,000</td>
<td>16,000</td>
</tr>
<tr>
<td>Hardness, Rockwell</td>
<td>785</td>
<td>95</td>
<td>88</td>
<td>103</td>
<td>100</td>
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<td>Compressive Strength</td>
<td>psi</td>
<td>695</td>
<td>18,000</td>
<td>18,000</td>
<td>24,000</td>
</tr>
<tr>
<td>Optical</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index of Refraction</td>
<td>%</td>
<td>542</td>
<td>1.491</td>
<td>1.491</td>
<td>1.491</td>
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<tr>
<td>Dispersion</td>
<td>%</td>
<td>542</td>
<td>49</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Visible Light Transmittance</td>
<td>%</td>
<td>791</td>
<td>&gt;92</td>
<td>&gt;92</td>
<td>&gt;92</td>
</tr>
<tr>
<td>Haze</td>
<td>%</td>
<td>1003</td>
<td>&lt;3</td>
<td>&lt;3</td>
<td>&lt;3</td>
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<tr>
<td>Gloss</td>
<td>%</td>
<td>1223</td>
<td>90</td>
<td></td>
<td>90</td>
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<tr>
<td>Miscellaneous</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Specific Gravity</td>
<td></td>
<td>792</td>
<td>1.18</td>
<td>1.18</td>
<td>1.19</td>
</tr>
<tr>
<td>Flammability</td>
<td></td>
<td>635</td>
<td>1.0</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Inherent Viscosity</td>
<td></td>
<td>0.43</td>
<td>0.45</td>
<td>0.45</td>
<td>0.88</td>
</tr>
</tbody>
</table>

---

a) All data obtained at 73°F unless otherwise indicated.
b) Laminates reinforced with 25% chopped strand glass fiber mat.
### THERMAL AND ELECTRICAL PROPERTIES OF "LUCITE" ACRYLIC RESINS

<table>
<thead>
<tr>
<th>Property(1)</th>
<th>Units</th>
<th>ASTM D-Method</th>
<th>&quot;Lucite&quot; Sheet Extruded from</th>
<th>&quot;Lucite&quot;</th>
<th>&quot;Lucite&quot;</th>
<th>&quot;Lucite&quot;</th>
<th>Sheet Cast from</th>
<th>Reinforced Laminates Cast from &quot;Lucite&quot; Acrylic Resin</th>
<th>Monomer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coefficient of Linear Thermal Expansion, -100°F Average</td>
<td>in./in./°F</td>
<td>696</td>
<td>4 x 10^-4</td>
<td>4 x 10^-4</td>
<td>3 x 10^-4</td>
<td>3 x 10^-4</td>
<td>4 x 10^-4</td>
<td>2.5 x 10^-4</td>
<td></td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>BTU/hr./sq.ft./°F/in.</td>
<td>Cenco-Finch</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.3</td>
<td></td>
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<tr>
<td>Specific Heat</td>
<td></td>
<td></td>
<td>0.35</td>
<td>0.35</td>
<td>0.35</td>
<td>0.35</td>
<td>0.35</td>
<td>0.28</td>
<td></td>
</tr>
<tr>
<td>Creep, Load, 100 psi, 100 hrs., 122°F</td>
<td>%</td>
<td>621</td>
<td>0.7</td>
<td>—</td>
<td>0.35</td>
<td>0.3</td>
<td>214</td>
<td>230</td>
<td></td>
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<tr>
<td>Distortion Temp., 260 psi</td>
<td>°F</td>
<td>665</td>
<td>180</td>
<td>166</td>
<td>202</td>
<td>204</td>
<td>214</td>
<td>500 (1/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>Electrical</td>
<td></td>
<td></td>
<td>149</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>540 (1/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>Electric Strength</td>
<td>v./mil.</td>
<td></td>
<td>149</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>400</td>
<td>500 (1/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>Dielectric Constant, 60 cycles</td>
<td></td>
<td></td>
<td>150</td>
<td>3.9</td>
<td>3.9</td>
<td>3.5</td>
<td>3.3</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>100 cycles</td>
<td></td>
<td></td>
<td>150</td>
<td>3.4</td>
<td>3.6</td>
<td>3.2</td>
<td>3.0</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>1000 cycles</td>
<td></td>
<td></td>
<td>150</td>
<td>2.9</td>
<td>2.9</td>
<td>2.7</td>
<td>2.5</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td>Dielectric Factor, 60 cycles</td>
<td></td>
<td></td>
<td>150</td>
<td>0.04</td>
<td>0.04</td>
<td>0.06</td>
<td>0.06</td>
<td>0.05</td>
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</tr>
<tr>
<td>100 cycles</td>
<td></td>
<td></td>
<td>150</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
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</tr>
<tr>
<td>1000 cycles</td>
<td></td>
<td></td>
<td>150</td>
<td>0.03</td>
<td>0.03</td>
<td>0.02</td>
<td>0.02</td>
<td>0.04</td>
<td></td>
</tr>
</tbody>
</table>

All data obtained at 73°F unless otherwise indicated.
For panels containing 25% chopped strand glass fiber mat.
### RESISTANCE OF "LUCITE" ACRYLIC RESINS TO SOLVENTS AND CHEMICALS

<table>
<thead>
<tr>
<th>Reagent</th>
<th>Concentration (%)</th>
<th>Temperature (°F)</th>
<th>Resistance*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaldehyde</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
<tr>
<td>Acetic Acid</td>
<td>10</td>
<td>150</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>85</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>90</td>
<td>150</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>85</td>
<td>U</td>
</tr>
<tr>
<td>Acetone</td>
<td>100</td>
<td>120</td>
<td>U</td>
</tr>
<tr>
<td>Alcohols, Amyl</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
<tr>
<td>Butyl</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
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<td>100</td>
<td>120</td>
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<td>100</td>
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</tr>
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<td>100</td>
<td>U</td>
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<tr>
<td>Alum, Ammonium</td>
<td>10</td>
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<td>S</td>
</tr>
<tr>
<td>Aluminum Chloride</td>
<td>30</td>
<td>150</td>
<td>S</td>
</tr>
<tr>
<td>Ammonia (Gas)</td>
<td>100</td>
<td>100</td>
<td>S</td>
</tr>
<tr>
<td>Ammonium Carbonate</td>
<td>Sat'd</td>
<td>100</td>
<td>S</td>
</tr>
<tr>
<td>Ammonium Chloride</td>
<td>30</td>
<td>150</td>
<td>S</td>
</tr>
<tr>
<td>Ammonium Hydroxide</td>
<td>30</td>
<td>100</td>
<td>S</td>
</tr>
<tr>
<td>Amyl Acetate</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
<tr>
<td>Aniline</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
<tr>
<td>Barium Hydroxide</td>
<td>10</td>
<td>120</td>
<td>L</td>
</tr>
<tr>
<td>Benzaldehyde</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
<tr>
<td>Benzene</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
<tr>
<td>Benzoic Acid</td>
<td>Sat’d</td>
<td>125</td>
<td>S</td>
</tr>
<tr>
<td>Carbon Tetrachloride</td>
<td>100</td>
<td>75</td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>120</td>
<td>U</td>
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<td>Cetane</td>
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<tr>
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<td>Diesel Oil</td>
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</tr>
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<td>Diethylene Glycol</td>
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<tr>
<td>Ethyl Acetate</td>
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<td>120</td>
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<tr>
<td>Glycerine</td>
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<tr>
<td>Higher Fatty Acids</td>
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<td>100</td>
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<td>210</td>
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<td>Hydrofluoric Acid</td>
<td>40</td>
<td>85</td>
<td>L</td>
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<td>Hydrogen Peroxide</td>
<td>10</td>
<td>100</td>
<td>S</td>
</tr>
<tr>
<td>Kerosene</td>
<td>100</td>
<td>100</td>
<td>L</td>
</tr>
<tr>
<td>Lactic Acid</td>
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<td>100</td>
<td>L</td>
</tr>
<tr>
<td>Lubricating Oil</td>
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<td>L</td>
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<tr>
<td>Methyl Ethyl Ketone</td>
<td>100</td>
<td>100</td>
<td>U</td>
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<tr>
<td>Naphtha</td>
<td>100</td>
<td>100</td>
<td>U</td>
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<td>Nitric Acid</td>
<td>10</td>
<td>100</td>
<td>L</td>
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<tr>
<td>Oxaic Acid</td>
<td>Sat’d</td>
<td>125</td>
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</tr>
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<td>Phenol</td>
<td>10</td>
<td>70</td>
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<td>Phosphoric Acid</td>
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<td>150</td>
<td>S</td>
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<td>Potassium Bichromate</td>
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<td>100</td>
<td>S</td>
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<td>100</td>
<td>S</td>
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<tr>
<td>Potassium Hydroxide</td>
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<td>120</td>
<td>L</td>
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<td>Potassium Sulfate</td>
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<td>150</td>
<td>S</td>
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<tr>
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<td>70</td>
<td>100</td>
<td>S</td>
</tr>
<tr>
<td>Sodium Hypochlorite</td>
<td>50</td>
<td>100</td>
<td>S</td>
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<tr>
<td>Sodium Nitrate</td>
<td>50</td>
<td>200</td>
<td>S</td>
</tr>
<tr>
<td>Sulfuric Acid</td>
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<td>200</td>
<td>L</td>
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<td>100</td>
<td>100</td>
<td>U</td>
</tr>
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<td>Toluene</td>
<td>100</td>
<td>120</td>
<td>U</td>
</tr>
<tr>
<td>Xylene</td>
<td>100</td>
<td>100</td>
<td>U</td>
</tr>
</tbody>
</table>

*S = Satisfactory, L = Limited Service, U = Unsatisfactory. These ratings are approximate, actual service life may vary widely depending on conditions of service and purity of reagent.
EXPLANATION OF PLATE X

A front view of the slide frame, and an exploded detail showing frame construction.
Slide Framing

Scale 1/8" = 1".

Slide - 12.5" clear acetate, 18" x 36"
exposed area

Front View

Exploded View

Slide

1/4" bevel to aid painting and cleaning of slides

2" - #9 F.H. wood screw

1" x 3" white pine rails (typ.)
all corners 45°

5/8" slot 1" deep to hold slide
EXPLANATION OF PLATE XI

Fig. 1. Picture of the slide used for projection for Part I of the poem.
Fig. 2. Slide for Part II.
Fig. 3. Slide for Part III.
Fig. 4. Slide for Part IV.
Fig. 5. Slide for Part V.
Fig. 6. Slide for Part VI.
Fig. 7. Slide for Part VII.
Fig. 8. Slide for Part VIII.
Fig. 9. Slide for Part IX.
A WEST WIND RISES

Fig. 1.

Fig. 2.

Fig. 3.
EXPLANATION OF PLATE XII

A cost analysis of the entire Linnebach projector project.
<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear acetate (4 sheets, 36&quot; x 60&quot;)</td>
<td>$40.80</td>
</tr>
<tr>
<td>Lumber (25 bd. ft.)</td>
<td>5.61</td>
</tr>
<tr>
<td>Sheet metal (56 sq. ft.)</td>
<td>6.65</td>
</tr>
<tr>
<td>Inks (3 colors, 1 oz. ea.)</td>
<td>5.40</td>
</tr>
<tr>
<td>Pop rivets (200 ea.)</td>
<td>4.60</td>
</tr>
<tr>
<td>Strap iron (20' - 3/16&quot; x 3/4&quot;)</td>
<td>1.00</td>
</tr>
<tr>
<td>Corner braces (4 ea., 6&quot; x 5&quot;)</td>
<td>2.00</td>
</tr>
<tr>
<td>Machine bolts (6 ea., 3/8&quot; x 1&quot;)</td>
<td>.42</td>
</tr>
<tr>
<td>Machine screws (8 ea., 1/2&quot; x 3-32)</td>
<td>.24</td>
</tr>
<tr>
<td>ASR-12 Cable (6')</td>
<td>1.20</td>
</tr>
<tr>
<td>Paint remover (1 qt.)</td>
<td>1.50</td>
</tr>
<tr>
<td>Metal primer spray (1 pt.)</td>
<td>1.75</td>
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<tr>
<td>Flat black enamel spray (6 pts.)</td>
<td>10.50</td>
</tr>
<tr>
<td>Electrical take-alls (6 ea.)</td>
<td>2.10</td>
</tr>
<tr>
<td>Wood screws (36 ea., 2&quot; - 49 FH)</td>
<td>.72</td>
</tr>
<tr>
<td>Male parallel-blade connectors (2 ea.)</td>
<td>2.60</td>
</tr>
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</table>

**Total cost of 2 projectors and 12 slides** $87.09
EXPLANATION OF PLATE XIII

The make-up chart for the readers.
### MAKE-UP CHART - A WEST WIND RISES

<table>
<thead>
<tr>
<th>Readers</th>
<th>Base</th>
<th>Hi-Lights</th>
<th>Powder</th>
<th>Special</th>
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<tr>
<td><strong>Men:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larry Hovey</td>
<td>6A</td>
<td>Dark Rouge</td>
<td>5</td>
<td>Pancake base</td>
</tr>
<tr>
<td>Boyd Masten</td>
<td>6A-5½</td>
<td>Brown Shading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bill Kammer</td>
<td>6A-5½</td>
<td>White Highlights</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Chuck Boles</td>
<td>6A</td>
<td></td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><strong>Women:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nancy Stone</td>
<td>7A-2A</td>
<td>Light Rouge</td>
<td>7R</td>
<td>Arms + Neck - Body Makeup 7A-6A</td>
</tr>
<tr>
<td>Jamie Aiken</td>
<td>7A-2A</td>
<td>Blue Eye Shadow</td>
<td>7R</td>
<td></td>
</tr>
</tbody>
</table>
EXPLANATION OF PLATE XIV

Fig. 1. The floor plan of the entire theatre (Williams Auditorium, Unberger Hall.)

Fig. 2. Side view of the entire theatre.
Seating - 6 seats (20" wide ea.) x 27 rows (2'10" ea.)

Seating - 14 seats x 25 rows

Fig. 1

Section 'A' above

Fig. 2
EXPLANATION OF PLATE XV

Fig. 1. Floor plan of the stage, showing the position of the elements of the setting.

Fig. 2. Side view of the stage and setting (section taken from stage left, at the center line of the stage.)
EXPLANATION OF PLATE XVI

Fig. 1. Light plot for the production.

Fig. 2. Detail 'A' showing the position of instruments on the light pipes.
Cables are strung on the floor to light board at the back of the house.

Both pipes are seen looking from the center of the house toward each pipe respectively.

Plate XVI cont.
Fig. 2.
Light Plot
Detail 'A'
Scale $\frac{1}{2}'' = 1'$
EXPLANATION OF PLATE XVII

Lighting instrument schedule for the production.
### Instrument Schedule - A West Wind Rises

<table>
<thead>
<tr>
<th>No.</th>
<th>Location</th>
<th>Instrument</th>
<th>Wattage</th>
<th>Gel Color</th>
<th>Area Covered</th>
<th>Dimmer No.</th>
<th>Ganged With</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>101</td>
<td>Stage right</td>
<td>6&quot; Fresnel</td>
<td>500 W</td>
<td>Light Straw Rosco #905</td>
<td>1</td>
<td>1</td>
<td>204</td>
<td>Tophat</td>
</tr>
<tr>
<td>102</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>103</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3</td>
<td>202</td>
<td></td>
</tr>
<tr>
<td>104</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>4</td>
<td>201</td>
<td></td>
</tr>
<tr>
<td>201</td>
<td>Stage left</td>
<td></td>
<td></td>
<td>Sp. Lavender Rosco #712</td>
<td>4</td>
<td>4</td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>202</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td></td>
<td></td>
<td>2</td>
<td>2</td>
<td>102</td>
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<tr>
<td>301</td>
<td>Stage center</td>
<td>Linnebach</td>
<td>1000 W</td>
<td>Slides Projector Screen</td>
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<td>1</td>
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<td></td>
</tr>
<tr>
<td>302</td>
<td></td>
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<td></td>
<td></td>
<td>6</td>
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EXPLANATION OF PLATE XVIII

Lighting cue sheet for the production.
# PLATE XVIII

**Light Cue Sheet - A West Wind Rises**

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<th>Cue No.</th>
<th>Description and level</th>
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<tbody>
<tr>
<td>1</td>
<td>House lights ↓ 0</td>
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</tr>
<tr>
<td>2</td>
<td>Dinner 5 ↑ 10</td>
<td>15</td>
</tr>
<tr>
<td>3</td>
<td>Dinner 1 ↑ 9</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Dinner 2 ↑ 10</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Dinner 3 ↑ 10</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Dinner 4 ↑ 10</td>
<td>5</td>
</tr>
<tr>
<td>7</td>
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</tr>
<tr>
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</tr>
<tr>
<td></td>
<td>Dinner 6 ↑ 10</td>
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</tr>
<tr>
<td></td>
<td>Dinner 4 ↑ 10</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
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<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Dinner 2 ↑ 10</td>
<td>5</td>
</tr>
<tr>
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<td>Dinner 1 ↑ 9</td>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td></td>
<td>Dinner 5 ↑ 10</td>
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</tr>
<tr>
<td></td>
<td>Dinner 2 ↑ 10</td>
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</tr>
<tr>
<td>12</td>
<td>Dimmers 3 &amp; 4 ↑ 10</td>
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</tr>
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<td>Dinner 1 ↑ 9</td>
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<td>14</td>
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<tr>
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<td>Dinner 6 ↑ 10</td>
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<tr>
<td></td>
<td>Dinner 3 ↑ 10</td>
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<tr>
<td>Cue No.</td>
<td>Description and level</td>
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<tr>
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<td>-----------------------</td>
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<tr>
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<tr>
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</tr>
<tr>
<td></td>
<td>Dinner 6 ↓ 0</td>
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</tr>
<tr>
<td></td>
<td>Dinner 5 ↑ 10</td>
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</tr>
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</tr>
<tr>
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<tr>
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</tr>
<tr>
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</tr>
<tr>
<td>Cue No.</td>
<td>Description and level</td>
<td>Count</td>
</tr>
<tr>
<td>---------</td>
<td>-----------------------</td>
<td>-------</td>
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<tr>
<td>29</td>
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</tr>
<tr>
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</tr>
<tr>
<td></td>
<td>Dimmer 2 ↑ 10</td>
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</tr>
<tr>
<td>33</td>
<td>Dinner 3 ↑ 10</td>
<td>5</td>
</tr>
<tr>
<td>34</td>
<td>Dinner 4 ↑ 10</td>
<td>5</td>
</tr>
<tr>
<td>35</td>
<td>Dinner 1 ↑ 9</td>
<td>5</td>
</tr>
<tr>
<td>36</td>
<td>Consecutive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dimmers 1-4 ↓ 0</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Dimmers 1-4 ↑ 10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Dimmers 1-4 ↓ 0</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>House lights ↑ 10</td>
<td>5</td>
</tr>
</tbody>
</table>
EXPLANATION OF PLATE XIX

Rehearsal schedule.
Rehearsal Schedule (All rehearsals will be held in the Purple Masque Theatre)

Dec. 14, Monday - 7:00 pm, Entire Cast (first read-through)
Dec. 15, Tuesday - 3:00 pm, Women
Dec. 16, Wednesday - 7:00 pm, Men

Christmas Vacation
Jan. 4, Monday - 7:00 pm, Entire Cast
Jan. 5, Tuesday - 3:00 pm, Women
Jan. 6, Wednesday - 7:00 pm, Men
Jan. 7, Thursday - 3:00 pm, Women
Jan. 8, Friday - 7:00 pm, Men
Jan. 11, Monday - 7:00 pm, Men (start rehearsal music)
Jan. 12, Tuesday - 3:00 pm, Women (with music)
Jan. 13, Wednesday - 7:00 pm, Men (with music)
Jan. 14, Thursday - 3:00 pm, Women
Jan. 15, Friday - 7:00 pm, Entire Cast (with music)
Feb. 7 - 12, times arranged to fit new schedules, Entire Cast (with music)
Feb. 14, Sunday - 7:00 pm, Entire Cast (tech. rehearsal)
Feb. 15, Monday - 7:00 pm, Entire Cast (dress rehearsal)
Feb. 16, Tuesday - 7:00 pm, Entire Cast (dress rehearsal)
Feb. 17, Wednesday, 7:00 pm, Entire Cast (dress rehearsal)
Feb. 18, 19, and 20, Production! (call = 6:30 pm)

Clayton Hawes
EXPLANATION OF PLATE XX

A copy of the program.
THE K STATE PLAYERS
and THE DEPARTMENT OF SPEECH
present

A WEST WIND RISES

A Narrative Poem by Bruce Cutler

A Thesis Production
by Clayton Hawes

With Music by
Joshua Missal

Produced in Cooperation with
The University of Nebraska Press

WILLIAMS AUDITORIUM

February 18, 19, 20, 1965  8:00 p.m.

NEXT PRODUCTIONS: "NO EXIT" AND "A PHOENIX TOO FREQUENT" March 18 19 20
Purple Masque Theatre
A WEST WIND RISES

CAST (in order of speaking)

William Kammer
Larry Hovey
Chuck Boles
Boyd Masten
Nancy Stone
Jamie Aiken

PRODUCTION STAFF

Stage Manager... Mary Lynn White
Pianist......... Janice Hicks
Drummer......... Bernie Cohen
Lighting Head... Robert Hossfeld
Assistants..... Glenda Apt, Michele Clark Joyce Back
Costumes......... Cast
Makeup.......... Glenda Apt and Cast
Business Manager. David Sadkin Betty Cary
House Manager.... Peg Tanner
Ushers.......... Kathy Hawes, Elaine Huff Edna Becker
Publicity....... Meredith Moore, Head; Mary Lynn White, Glenda Apt

THE POEM

Part I.... Dispatch to the New York Tribune
Part II... James Montgomery Builds His House in Kansas
Part III.. The Meeting at Jackson's Store
Part IV... Miriam Nickell's Letter To Her Mother
Part V..... Statement by the Reverend Mr. B. L. Read
Part VI... The Marriage of Lily Stillwell
Part VIII. The Massacre
Part IX.... The Hanging of William Griffith

NEXT PRODUCTIONS: "NO EXIT" AND "A PHOENIX TOO FREQUENT" March 18 19 20

Purple Masque Theatre
EXPLANATION OF PLATE XXI

Fig. 1. A review of the production that appeared in the campus newspaper, Kansas State Collegian, on Thursday, Feb. 18, 1965.

Fig. 2. A review of the production written by Professor Earl Davis, Head of the English Department at Kansas State University, and published in The Manhattan Mercury on Friday, Feb. 19, 1965.

Fig. 3. An article printed in the Collegian on Thursday, Feb. 18, 1965.
By Karen Eickelberg
English Graduate Student

"A West Wind Rises" and breathes across a rolling and massacre that melted in the etching of this Free
a narrative poem by Bruce Cutler, is being present-
, whispers of men, truth, and lives that answered for
truth. A saga of Kansas fiery with the faith, blood,
as a staged reading this weekend by the Kansas State

Episodes in the tale of the "Marais des Cygnes Mas-
are unfolded by six readers posted stark against a
discerning panorama of Kansas sky. The vocal per-
formances are chosen to weave effective contrast to one
her. William Kammer's commentator quality that
is to a cracking rage frequently lacks feeling
provides contrast for Larry Hovey's sensitive and
ful (sometimes too forceful) interpretation. Chuck
s' explosive power is often tempered by Boyd Masten's
or intensity.
The two female members of the cast, Nancy Stone and
Aiken, lend a startling and perhaps sobering gen-
se to the portrait of general gore and violence. Even
een two soft feminine voices there is variety in the
mother of Miss Aiken next to the penetrative delicacy
Miss Stone.

Highest honors must go to Miss Stone for a subtle
moving interpretation. The contrasts are skillfully
ed against one another by director Clayton Hawes in
that prevents any single personality from being
ighted and renders each but a various part of the
saga.

A single character's lines are not all delivered by one
or but are divided between two or more readers. Thus,
der becomes identified with a particular character
narrative, and the six readers seem joined in a
effort to portray the various events.

Congratulations must be extended behind the scenes
nice Hicks, pianist, and Bernie Cohen, drummer, for
-effective interpretation of the background music.

The sometimes bright, sometimes haunting, often thrill-
ing score was written as accompaniment for the poem by
Joshua Missal of Wichita State University. The poet,
Bruce Cutler, received his Master's degree in English at
K-State in 1957 and is an assistant professor of English
at Wichita State University.

Clayton Hawes, director, has worked with new ma-
terials for projected scenery to develop the imposing ex-
panse of glowing sky that provides a changing backdrop
for the production. "A West Wind Rises" is a thesis pro-
duction for Hawes, one of a group of such lively and valu-
able contributions to dramatic art on our campus in the
last few years.

The whole of the production presents K-State audi-
ences with an impassioned presentation of blood and
thunder folklore grounded solidly in historical truth. The
rough-hewn poetry of Cutler cuts the story of the ride of
Missouri slave owners and sympathizers to wound up
and massacre Kansas Free Staters out of ragged flesh and
prairie sod.

The first section of "A West Wind Rises" is "Dis-
patch to the New York Tribune" and closes with a call to
all citizens who stand for freedom.

We know, if ever we were ignorant,
this is a visage of that system known
as slave, honest and undissimulate.
Reader: a territory large enough
for to be a kingdom lies within its grasp,
the prairies, hills, river slowly blackening
under the shackles dragged by Africans!
Ride with us, that the seeds of freedom grow
in the trunk and taproot from these ashes! Proclaim
in words broadcast to the living wind:
some oaks of justice root in Kansas soil!

As well as providing a blazing reminder of the ideal-
ism and heroism of a day when the name of Kansas meant
a bone to love and an ideal to fight for, the presentation
may spur those who would be Free Staters in a day when
stands are less clear, but crimes are full as merciless.
West Wind Rises

Praises Kansas State Play

Kansas bleed and dies again the dramatic love story of the 1883 Massacre des Cygnes massacre. The director, Clayton Hawes, is the director of the reading, and Janice K. Smith is in charge of the production. The play is the first production of the readers' theater. The purpose of the theater is to

PLATE XXI cont.

Fig. 2.

Reading's Author To Attend Opening Performance Tonight

Bruce Cutler, author of "West Wind Rises," will attend the K-State Players' opening night performance at 8 tonight of his narrative poem. The production is tonight, Friday and Saturday in Williams auditorium.

Cutler said in the foreword to the reading that he did not intend to tell only the historical sequence of the Massacre des Cygnes Massacre of 1883, but he wanted to "carry the narrative beyond the hard skeleton of fact into the vulnerable issue of possibility."

CUTLER, a former English professor here is now assistant professor of English at Wichita State University. He plans to leave soon for Paraguay, where he will be studying under a Fulbright scholarship.

Cutler's poem is the first production of the readers' theater. The purpose of the theater is to
EXPLANATION OF PLATE XXII

A budget analysis for the production.
### PLATE XXII

**Production Budget**

#### Expenditures:
- **Poster board**: $9.34
- **Ticket printing**: 11.38
- **Program paper**: 3.87
- **Muslin (Drop)**: 11.40
- **Paint**: 16.00
- **Music rental**: 25.00
- **Piano rental**: 30.00
- **Scripts**: 14.40
- **Notebooks and supplies**: 6.89
- **Physical plant**: $43.94
  - Moving of piano
  - Moving of sets
  - Connecting light cable
- **Inks**: 23.85

**Total Expenditures**: $166.07

#### Profits:
- **Ticket sale returns**: $109.00

#### Totals:
- **Expenditures**: $166.07
- **Profits**: 109.00
- **Deficit**: 57.07
EXPLANATION OF PLATE XXIII

Pictures of the production.
A WEST WIND RISES—Jamie Aiken, SED So, left, and Nancy Stone, SED Jr, two of the readers for “A West Wind Rises,” rehearse their lines. The narrative poem by Bruce Cutler will be produced by the K-State Players tonight, Friday and Saturday in Williams auditorium. Cutler will attend opening night performance.
APPENDIX B

Prompt Script

Prompt Script Key:

I. Readers' notations:

A. The Arabic numbers on the left of the script are the numbers of the readers speaking. The respective reader for each of these numbers is listed below:

1 - Bill Karrer  2 - Larry Hovey  3 - Boyd Masten  4 - Chuck Boles  5 - Nancy Stone  6 - Jamie Aiken

B. Parts in brackets within paragraphs are readers who join the one originally reading the paragraph.

II. Sound notations:

A. Cue numbers are always on the right of the script with the word "sound" preceding them.

B. Cues are renumbered from 1 for each part of the poem. This was done because the original score was so numbered, and the composer would not allow changes to be marked on that score.

C. Music cues are also in the form of notations, such as "overture," "begin fade," or "interlude."

III. Light cues:

A. Cue numbers are always on the right of the script with the word "lights" preceding them.

B. All light cues are numbered consecutively through the entire script.

IV. Deleted portions of the script have one horizontal line drawn through the words to be left out.
The shortest route to Trading Post lay down in bottom ground where oak-roots veined the banks and soft alluvium of swelling streams; then rose through sinuous stands of sycamore, through bursting crimson maple-blossoms and hillside altitudes of wild apple flowering in prodigal disuse. How Spring had whet that air to sweetness! I traveled armed, in company with Free State men who said they rode to join Montgomery's guerrillas. Closemouthed, civil, each seemed to manifest his own dissimulation of intent, but it was evident they'd settle up the audit of a massacre in blood.

Descending to the ford, our horses slowed and walked pastern-deep in gumbo along
the broad meanders of Marais des Cygnes.

She ran chocolate with mud that day. And deep.

To South, a rapids shoaled with limbs and roots
pushed whitecaps in the tide
as though the Cheyenne chief and his beloved
Nanonie played below,
surfaced as swans, or slowly spread their wings
to soar into the warm and depthless hemisphere
above.

We had to drive our horses hard across.

2-Trading Post was half a mile beyond.

The sod and log-roofed buildings lay out low
and ruinous. So desolate the scene, at
at first I failed to note new signs of violence.

Horses filled the lean-to's;
guerrillas camped about the trading shack.

Entering, I discerned a plank table,
lighted by tallow, crowded all about
with visages that bore the Massachusetts
stamp, their eyes as clear as quartz is blue,
their beards untrimmed, it seemed, since Cincin-
nati.

One man beckoned, wiped a dish, and bade me
eat.
His name was Eli Snyder. His hands as large as hans were grizzled over, backs and palms; blacksmith by trade, he was a Free State man. Journalist, he said, the men of Trading Post were Free Soil in politics; primitive in character; inoffensive, in truth. Peace men. Three years before, a certain Charles Hamelton arrived from Georgia; his kin came after him and helped construct a house more fortified than most. Softspoken eloquence, memory for names made Hamelton a justice of the peace. Freemen forgot he owned a dozen slaves. 

3-By 1857, Emigrant Aid had sent out steamboats full of Free State men and James Montgomery rode the borders East: as prospects of enslaving Kansas fell the viper skin of Hamelton's deceit peeled with his political power. Then the man and border ruffian stood revealed in true deformity.
His house became a fort and palisades.
The Judas band—Brockett, Hubbard, and all manner of Missouri men—took rein, burning, stealing, beating Free State men—lighting down at night, long gone with the dawn Missouri-bound across the water.

4-It is impossible to explain what hope or desperation pricked the stallion flanks of Hamelton's desires. He issued threats against the lives of travelers; he compiled lists of Free State men he marked for capture and summary dispatch. Called Captain now, hinting he led five score irregulars, he commandeered horses from the settlements all along Marais des Cygnes. By Spring of 1858, good Free State men rose up, and ringed his cedar palisades with blazing pitch and steel of Sharps' rifles, ordering him to leave forthwith. He did. And rode six miles to Jackson's store, Missouri. There, on 18 May, he met his men.

3-[Are you for blood?]—he asked. They were. [Then ride with me tomorrow down Marais des Cygnes. We'll settle with those bastards once for all.]
Twenty-five agreed to strike the blow
for blood on Trading Post that day, when May
breezes played in the sycamores and oaks.

1 At nine o'clock on 19 May, the men
of Trading Post harrowed their furrows, felled
cedars, adzed a ridge-pole out of oak.
Clouds of dust arose from cattle droves.
Sun was opening the vaults of God's green
treasury, soft-yielding to the nipping hoe.
Women washed. A smell of smoke
and lye-soap shouldered among the trees
like sweet-armed incense, and children planted
peas.
A pilgrim village, washing out its hair
one May morning, well
might move a murderer to mind the voice
of natural compassion. But Hamelton
did not. As dark as winds that whip the arms
of mountain pines, his raiders swept around
Spy Mound. As sleep relaxed a baby's hand
cupped to the image of its mother's breast, they
burst
out of the timber, deadly as the Sioux.
2—Some gripped pistols. Others drew two-edged
border knives. They pulled young Johnny Camp-
bell
and G.B. Andrews from the store; then
they toppled shelves. They sacked the calicoes
and bolts of crinoline, stuffed them inside
buffalo robes. Boots and shoes and cash,
such as it was, they split. The one named Hub-
bard
swore the settlers owed him high and wide,
their lives and wives, and searched for whiskey.

His mad
commander, meanwhile, ferreted the men
out of the fields and mill for hostages.
A William Stillwell happened upon the scene;
his buckboard became
the plunder wagon, and he a prisoner.
The settlers—pressed by horsemen, knocked down
and jeered—
were driven from their town. A missionary
crossed their trail; he too was seized and driven.
The black-boot Herod marked eleven men
for sacrifice, then went himself to take
the blacksmith Snyder, who threw him out
and shotgunned him. Raging with this defeat,
Hamelton drove his victims along
a grass ravine, lined them up five yards away,
and turned his guns upon them. The south wind
swept
along that smooth declivity; cotton woods
soughed in the wind. The men who were con-
demned
stood bareheaded and unarmed upon the slope,
backs to the naked prairie that rose
a grassland roadway to the Otherwhere.

No one asked for mercy. A Free State man
said, Gentlemen, if you intend to shoot
then take good aim. One of the ruffians
broke away from line, but Hamelton swore
him back. The sense of triumph possessed,
climbed
as visibly upon his face as blood:
he raised his Colt, ordering his men to fire.
With the fall of firing pins, the charges blown,
ball and buckshot irrevocably dispatched,
the bodies fell awkwardly, spilling back,
pitching across the sod
boot to boot, arm to temple, slowly sinking
their stiffening fingers in the buffalo grass.
Hamelton said, Be sure they all are dead.
3-His men did not respond. A moment passed.

Tentative, a few dismounted and approached
the bodies. Stillwell lay face up, his breast
a sponge, killed by a double-barrel blast
of rodded pistol balls. He's dead, said one.
Then they began to kick the bodies,
roll them, searching for signs of life. When one
victim groaned, it was Hamelton who placed
his warm revolver to that ear and fired,
 remarking as he did he'd always found
shots like that the surest he could make.
His men observed, but sickened inwardly.
They quickly stripped the bodies of their rings
and mounted. Working with haste, they over-
looked
what Free State men wore still alive. Hamelton's
irregulars seemed to have had their fill
of back-shooting. In desultory file
they rode out of the long ravine, wending down
a rusty watercourse to the shade of trees.

1-Now I have seen the dead and consoléd the few
survivors, I impatiently await
the imminent arrival of Montgomery
before we cross in force to open up
that abscess called Missouri for the murderers.
Meanwhile, the women slowly search the fields for oxen standing, waiting with their plows; they unknot the rawhide, lift off the yokes, and bring them slowly home. Women ride in ox-carts to the mouth of that ravine where Stillwell's wagon stands, his grocery sacks empty on the dashboard. From there, they walk in shadows. Something tainted, sweet, begins to infiltrate the air. The children weep; not knowing why, and help to quench with tears the venom of the curses that you hear voiced by these guerrillas, waiting, waiting. We all wait. But it will not be for long.

[We know, if ever we were ignorant: this is the visage of that system known as slave, honest and undissimulated.]

[Reader: a territory large enough to be a kingdom lies within its grasp. The prairies, hills, rivers slowly blackening under the shackles dragged by Africans!]

[Ride with us, that the seeds of freedom grow to trunk and taproot from these ashes! Proclaim in words broadcast to the living wind: red oaks of justice root in Kansas soil]
James Montgomery builds his house in Kansas
1854 - 1858

- Montgomery of Kentucky's Licking River farmed his father's land and mastered school.

Then, at thirty-nine, his inner ear discerned a leading voice; thereupon, he felled a linden, dug it out, perched his wife and sons precarious as owls inside and set his course for Westport Landing. A thousand river miles wound bobbinlike away from weathered wharves and steamboat bends westward to the Missouri and the Kaw.

Poling in streams as muddy as catarrh he cheered them singing On our Kansas claim, called it Canaan of this latter day where free men bore their witness to the Truth.

At Westport, he laid in their provisions, bartered for a wagon and a span of mules, then cut his way cross-country to the Cygnes. At water's edge, the grass grew horse-high rank:
on hills, waist-high to a man.

Prairie chickens gathered into autumn flocks
acres across, wild hops
raised canopies that covered walnut groves,
and bees shuttled in flyways through the dells.

Five miles west of Sugar Mound, he laid his claim:

Montgomery was a man who always seemed
to have a word working in his jaws:
here, his first was thankfulness; his second, work.
Thru fall, he dressed and chinked their cabin
dry.

Clarinda and the boys bloomed around the hearth
where beans and coffee boiled and workshoes
warmed.

He let his beard grow black and ragged, but
as every neighbor came to know, his shirts
were starched as if for school.

Sundays at Sugar Mound he led their prayers
reading in a deep and evenhanded voice
the King James Jeremiad of Free Soil.

By fall of 1856, Missourians
made their play. Suddenly the name of Clarke's
Raiders cracked across the plains like dry
lightning, and Kansas rocked
limestone-deep in the thunder of their hooves.
At Linnville, they forced
seven fevered Free State men to drink
and empty every bottle in their cabins,
beat them senseless with their rifle butts,
and raped their wives. Then they swarmed to
Sugar Mound.
At gunpoint, they made Montgomery watch
his cabin burn, and jeered
The safest place for Abolitionists is North.

In morning light the Raiders' hoofpoints showed
out southward black as bullwhip stripes, each
testament to slavery's ultimate reason.
Montgomery for the first time felt that stir
of righteous wrath that burns away the shell
of reticence and makes men act. Violence
would answer violence,
clandestine and quick. That night, sixteen men
gathered where Montgomery's house had stood.
Ankle-deep in ashes, they joined hands and swore
to bring in other Free State families;
then pledged their lives and fortunes to each
other—
that three rifle shots would bring them armed to ride under Montgomery; night or day.

Since posses of slaveowning men patrolled the Fort Scott road, the Brotherhood rode deep in timber to a meeting place. There, James Montgomery laid out plans to build a kind of house more suited to our needs and climate. Daily, armed parties went down to the water, cutting oak and walnut. Eight-foot logs were hewed; a center section contoured out in each, and tenons cut at either end. Each log was numbered, then covered with brush. Next Montgomery chose his site high on a hillside. There they laid a stone foundation topped by logs mortised to fit the numbered tenons. On March the twelfth, at dawn, his men assembled all the timbers, stood them up on end, bored augur holes, and drove mortise and tenons tight with oaken pins. Mortised logs received the top tenons, and puncheon doors were hinged. In a day of quick and clever work, Fort Montgomery rose strong as Solomon's temple on its hill.
Above log scallops and rifle ports
walnut rafters carried a roof of shakes
rived out of oak; from it, he perceived
the land at last was his.

Justice was next. Montgomery took the guise
of travelling Master, rode into Missouri, and when he found that Clarke
had not returned he took a school and nights
neighbored from hearth to hearth, working out
the Raiders' names. Two weeks hence he rode
hard home,
raised his company, and led
them into secret camp. Two of his men
he dressed as Indians: his enemies supposed
Miami bands nearby and sent out word
to Clarke. His men came singly or in pairs
only to make rendezvous with Kansas men
who jumped them, took their money, guns, and
mounts,
and brought reparations back to Sugar Mound.

And settlers said, One month with Montgomery
gave us back our claims and dignity.
For that year and the next, there was peace. Governor Geary chose to ignore the claims and counterclaims, said they were merely sparks out of the statehood bellows but sent a man he called a Marshal down to Sugar Mound, warning them against lawless reprisals. Montgomery threw him out. Slowly, he had come to see that those who wanted Kansas slave were Whig as well as Democrat; they knew no politics but strength. Then a territorial court was called in Bourbon County, and juries named to scrutinize the claims along the Cygnes. Beneath a Fort Scott poplar tree, that court rescinded Free State claims in summonses scrawled B. Whacker. A year of armed defense had cost Montgomery his crop; he found his family larderless in winter, and now, ordered off their land. He called his men to take the step that destiny made absolute: summoning themselves, they formed a Free State County Court, confirmed their right to titles, claims, and deeds, and then addressed the Territory:

**Truth cannot be bought, burned, or terrorized:**

**Kansas will be free—we are the living proof.**

Send your Marshal—better, send us Clarke.
Adversity had made Montgomery hard.

Inside his fort, Clarinda found her life was pinioned to the fire—food for sixteen men on Mondays; Tuesdays, husband gone and cows staked in the pasture, waiting to be milked; Wednesdays, walking down the hillside, knowing where a hummock-hidden ambush lay; Thursdays, waiting for her husband trapped in tall grass without, and calling in the cows and dropping there the food she hid under her skirts; Friday nights, when he at last lay sleeping on the pallet, her hand clasped in his own, how a sniper's bullet smashed against a rafter and fell like a penny on her pillow.

That spring, one of the mules grew breachy, leaned down a fence, and went across the field to eat green corn. Johnny was sent to bring him back. The neighbor saw him with the mule and slapped his face. James came riding in, saw, and started with his gun to settle in his rage. She threw her arms around him, pulling him from his horse, pleading not to do the thing he ever would regret.
Only when the horse had dragged her ankles raw in thistles did he care to stop and turn, silent and withdrawn, for home. He never went again, but mornings stepped to a scallop in the wall, sighted down four hundred feet along the valleyside and knocked a cloud of rockdust in the air. He rode more often, nights; when he returned, he rarely gave his reason or his where.

4- In 1858, Lecompton's fraud of Territorial elections made Montgomery order daily drill. They called themselves militia, and gave both bed and horse to Old John Brown of Osawotamie, long-sufferer of cause, who knew as well as anyone the murderous intent of slavers: knew that a vicar of the Lord could shoot an unarmed Free State man and smile to Bushwhacker applause. Better a whole generation die in violence, man, woman, and child, than uncross a t in Free State, he proclaimed. In March, a band of Raiders struck at Denton's, cutting the old man down with buckshot in his cabin door. His wife replied by throwing dipperful
of boiling water in their faces,
and one named Fort Scott Brockett shot her too.
The saber and the rifle, muttered Brown.
Montgomery agreed. A few dissented,
saying they believed the courts would someday
prove the Free State cause—but when Dred Scott
uncrossed another t, it was they who came
to call for Brown as Adjutant—came to love
the old man on his chestnut, in velvet-blue
slouch hat, crimson cape, and flowing foot-long
beard;
and Montgomery, hard erect, in black, his bay
as lithe as steel—called them both hardriders.
the Saul and Jonathan of latter day.
III
THE MEETING AT JACKSON'S STORE

Bates County, Missouri
May 18, 1858

They come from Syracuse and Terre Haute.

Riding West, they leave cracker boxes and glass about, but when they go back East, all they leave is rabbit hair and fieldlark feathers.

You all have seen them when they lay blue-lipped and torpid in the cold, twenty below:

that spring, so weak they couldn't stand, they crawled

to eat the grass and berries on their hands and knees, vomit and eat, until their legs would hold them up. That is what I mean.

What do they sow? Their oats, their corn, their millet,
to burn and blast in southwest winds. They don't care.

They seek no home or comfort on our land.

The hills are sacrifice, and rivers, creed.

And Denton was the worst. Hardheaded, wet with sweat, he drove his mules like horses, drove
his land as if it owed him debt, and called
the cold of '55 and three months dry
of summer '57
recompense for wicked, blackheeled slaving men.
Hamilton, maybe you
could take as much, but when I go for rail.
and Benton stands there, runs my way, and says
Send your letters down through hell, I'll run him
back.

I say Kansas is not for such as him:
we stand like on a shore where big-boled trees
enfold the waterholes and lines of brush
hold up the sky, but on beyond, the surf
is short-eyed grass and spiky cactus, hills
give way to mounds and hummocks, and the
brow
buffalo spill like shadows of a thundercloud.
Last December, we contrived to hunt
those herds that straggled down to Walnut Creek;
even James Montgomery came.
Colpetzer, Snyder and the rest, to shoot
a winterful of meat and blanket skins.
But after butchering and settling shares,
Denton and that hangdog missionary Read
rode away to Westport, on church affairs,
and you and I were countryboy enough
not to mind their reason.
They loaded in their crates marked bibles
and when they got them here
what they loaded out was rifles---Christian Sharps' repeaters. Then I knew the jack was down:
Denton played the card, and there was only one
a man could play to it. It was a fight,
pick it now or later.
He knew as well as me it had to be.

He stood his cabin on the Little Osage,
Aaron Cordell behind the live oak.
Billy Griffith next the stovewood. I called.
Denton, there's a preaching going on
at West Point. Lend a Scripture we can take.
One of the new ones you just got. Silence.
Then I heard the slink
a rifle barrel makes taken off the wall.
The door swung out. I'll blow you through, he said
and stepped around the jamb. My shot spun him back.
and down. Then I heard what sounded like
a rush of wings around my head, and boiling
water in my face. Aaron said she threw it
dipperfuls. I fired my second barrel blind.

4-Brockett, paused, and ran his hatbrim through his
hands.
Griffith, Hubbard, the Yealocks and Cordell,
Charles Hamelton, the one named Hardin Sheek,
leaned against the shelves, sat on their hunches
or on bags of beans. Jackson took his elbows
off the counter. [Free Staters is trade for me]
he said. [That's the way I feel] Brockett looked
around. [It was a fight and it was fair]
I don't incline to worry where they bought
their beans. Hamelton laughed. [Listen now
to Scotty talking--Brockett, it was you
declared your Grand Jury would link the Free
Staters out by August last. And now it's May]
Out the windowpane, Brockett watched a cloud
humping along the slope of Spy Mound.

3-I said this latitude
was not for corn, but hemp; not for towns,
but gangs of Africans. Any fool can see.
Once we didn't rather more than misplace
a Free State mule to make them weary out.  
But ones like Denton cut their teeth on granite.

4-The cloud had disappeared and now the scrub stood silhouette against a shell of sky.  
Hamelton propped his boot against the wall.

3-Brockett, you know the steam sawmill they're building on the Cygnes?  
You know the valley's bought and platted? You know by who? A Senator,  
Bigler, from Pennsylvania. You know what for?  
The Great Missouri River-Fort Smith railroad.

4-He drove his heel against the boards, and flushed.

3-If Boston Henry Beecher  
sends them rifles on a riverboat, let  
them lay just half a mile of track and by  
God Scott you'll see a cannon screwed aboard  
the first train out of Westport aimed to blow  
you and hemp and mules and niggers all to hell and never let a living Southern soul  
set foot that side of County Bates again.

4-Hamelton stood up. He leaned against  
the window, his beard gold as a god's
in sun that runs the vault of heaven. And that
is just the half; the other half is this—
once we had a choice: if Eli Snyder
went to Trading Post
to cast a vote to dispossess a man
of land and servants, we could cast a score
and go that night to flavor up his well
with spurge. Today, they're voting on the third
constitution in as many years.
They've run us out. They've run you Iealock:
out:
they've run out Scott; and my claim has a stake
they've pounded in the well-curb where their
trains
will ditch piss-water. Eli Snyder won't
be waiting long to write his Massachusetts
moneylenders for the cost our claims
will run in taxes, and when he does,
by God we won't have any dollar auctions.]

Hardin Sheek looked up. His beard was grown
around
a scar from mouth to collarbone. We seen
the sword, that it was buried in our flesh,
he said. We seen firebrands James Montgomery
loosed
to burn Jim Wells's store at Willow Springs.
We heard his words: Let vengeance fall upon
both the guilty and the indifferent.
I've rode with Clarke. And now I want to say, someday soon we have to settle up. you and me and everybody here.

A flight of crows tumbled out of the trees like pepper. When they had passed, Griffith spoke quietly, and dealt his words like cards.

Montgomery's made a list. He keeps one sheet. Brown has one. Eli Snyder has the third. When Will Allen drilled with them, he saw the names: mine is there, yours, Fort Scott's, Cordell's, all of us. It says: These were the Haleys of trafficked flesh in Kansas. Now there is not room sufficient to accommodate both them and us. We are the majority; we decree these men should gather traps, and should they then return, they forfeit both their chattels and their lives.

He says they even put a bounty on us. Hamelton's breath caught sharp. He turned, as Griffith finished. [They put a what?]

A bounty, Griffith said. Hamelton went white: [Turned out and dispossessed, and now to put a foot across a Federal line]
they say they'll hunt us down. Let your oxen out
to tall grass pasture near that line, or go
for deer or buffalo, they'll hunt you down;
they'll hide in broken country with their Sharps
and let you walk two hundred yards inside
before their first shot drives you hard for cover--
the next shot before you, then one behind--
then they run you round in circles, till you stand
winded, your eyes half blind with alkali,
while Eli Snyder sets his sights along
your buttons . . . shot like a scrawny, spring coyote.
and then they kick you over, bellyup,
cut off your tail and hang it on their fence . . .

I say God damn it no! they won't do that
to me or you. He wheeled around, excited
almost hoarse; Listen, tomorrow sunup
I'm going to make an expedition south
along the Cymes. If you men want to come,
then I say come. But I want no man here
at daybreak who is not hardriding. One
thing more: no man goes who'll not obey
my orders. I mean exactly that. I mean
these Free State bastards need attending to.

Hamelton turned and strode out through the
door.
The others watched him mount and ride off east; they stood, and did not move or speak until his horse was out of sight. Then the Yealocks left, saying, We'll be here tomorrow. Griffith left, Cordell. Hubbard rose and looked around: There's whiskey on the counter, Jackson said, while Brockett walked outside. Sheek untethered for him: You'll be here? Brockett nodded. Kansas is festered proud with Free State men, said Sheek, and we should put the lance to cautery and dig out the root. Snyder, I mean. Brockett said, There's a deal to hate in him. Then he mounted, and turned his horse toward West Point. An angry man won't watch the ground, he thought. His eyes are all ahead. Everything is there, what he hunts, its tracks and shadow. But he himself leaves tracks, casts a shadow. His hand, moving triggerward, is only one of two.
Willie was restless in his crib. I sat next the window with my sewing—those days that Samuel served as judge in Free State Court I set aside for fancy work. The sun spilled warm across my hands, and I had just begun to work a twist of scarlet silk into the outlines of a rose, when two shadows on the road appeared; then two, and two until at last a score of riders reined around Spy Mound. I thought more buffalo? but they are prime in winter. Then I saw the two on foot, their hands behind a man named Wing, who ran a sawmill on the Cygnes, and Johnny Campbell, his shirt bloody and torn.

I can't express the depths of fear I felt, nor how the column, slowing, palled in dust, held me helpless. We had lived through Clarke, watched him burn our house, watched his raiders cut off our chickens' legs and write Abol across the coop in blood.
But this was daylight:

Charles Hamelton rode first, and their gait
was not of raiders or of fugitives,
but of an army come to strike us down.

I couldn't move. I thought how just five months
before, all of us had gone to Walnut
Creek, how Hamelton and James Montgomery's
men
had organized the buffalo brigades, named
common constables and sworn the rules,
how they'd run the chase, turned the bulls and
cows
suddenly short and cut them down with fire,
and how we women worked in pairs to cut
the living hide from off
the backbones, strip them, then cut off handles
of flesh and run our knives a semicircle
round the humps, then the flanks, the ribs, the
necks.

6-Mother, we were far from our New England.

And we were hungry. You would have done
as we, and afterward, at creekside, the moon
rushing through sheep-flock clouds—with blazing
fires,
the smell of fresh-braised meat—
like us you would have talked and sung and storied
till the skies showed gray.
And just at dawn, with our meat packed in,
the oxen still shaking with the smell of blood,
I felt so strange—not sad or unhappy,
—exalted, yet foreboded, just as if
it had been a kind of feast so
for whom, for what, we never surely knew.

But this was daylight, and now I saw
the horsemen at my door. Hamelton walked
in. [Miriam, I want Sam] was all he said.
His words were clear, but I could see his hands—
the knuckles all were white. Charles, I said, he's
gone.

He drew his pistols. Two of his men
burst through the door, and one
called Aaron Cordell then said, I'll look around.
I hadn't moved. I slowly put my needle
in my apron, and looked at Hamelton.
You know his court's today, I said. But then
he spoke as I had never heard before,
cursing me to my face. [Another lie, he kept repeating, damned Free State lie.]

He motioned, and his men began to search the cabin. First they cast the bolsters down and overturned the pallets. They seemed to want to walk their boots on what was clean, and all the curtainings that hid our clothes came down, and then the clothes. Then my wild-plum jams were smashed across the floor. I made a move to stop this man-style bullying; Hamelton raised his guns and said, [Hold still.] They burst the latches of our trunk and raised the top. Cordell upturned it on the floor and kicked our linens into the mess of glass and jam.

Mister Hamelton, I said, I think you'd better tell your men that if they don't restore my things and make immediate amends, they'll have to reckon with my husband. And his friends. His lip twitched once. His florid, strongjawed face was set so hard, yet for a minute, I believe he was afraid. But then he said, [Mrs. Nickell, our reckoning is now. Once and for all.]
With that he turned to one whose nose was hung among his features like a bell-clapper, whose eyes had unashamedly been fixed on me these minutes past,

and said, \textit{Matlock fetch a ladder and look what's hidden in the loft.}

Matlock thrust a finger in his nose and looked around. \textit{Sam's not there, I said, but if it will content you, there's a ladder out behind.} Matlock shuffled out of doors. Suddenly, our clock began to chime. Hamelton and Cordell both whirled around, and then they saw it perched along the loft-ledge. Nine times it struck, and Willie cooed for all it pleased him.

\textit{Brought it all the way from Massachusetts!}

\textit{Hamelton asked. Yes, I answered, and then I don't know why I said it, but it came:}

\textbf{5} \textit{For all your malice and abuse, we like to run our lives as punctual as trains.}

At that, they gave each other such a look--
half of surprise, half of a kind of red and angry intuition. Hamelton said,

1[reckon that's the truth]

5-But all the while his anger mounted up.

You could see his lips were moving, yes, they said, she's right. He grimaced, then fell silent.

I wondered what had put him off that way.
He was a man disposed to take offense, but he was not unkind; and hitherto had never closed himself behind his blinds to snipe at passersby, like others had.
But I was not aware of what he thought.
I was alone, with Willie, and now, afraid.
Matlock brought the ladder in and stood it to the loft. Drag the old boy down by his britches, said Cordell, and laughed.

Matlock started up. If you knew us well.
I said, you'd know that Sam would never hide.
Cordell screwed up the corners of his mouth and switched his chew. All of them hide, he said, one time or another. I've pulled your Pat Devlin from a loft, and twenty more besides.
Boots first or shirt tails out, when they come they come like ready apples off a tree.
And all we have to do is shake the branch a little bit; just a little bit.
6—What he intended was to frighten me; instead, with Matlock rustling up above amongst our venison and bags of beans, nice dried apples, patches, and crinkly canes of raspberries we used for tea, I thought 
You might have dragged your colored runaways to light that way, but not a freeborn man.
The thought restored my calm, and so I stood as Matlock called, above, Captain Hamelton there ain't nobody here, but there's a side of venison looks pretty good to me.
Hamelton put his pistols down. All right; he said; and then I thought, Thank God, they'll now content themselves to steal.

5—We heard Matlock begin to slide the meat along the rafters; then his boot appeared along the ledge. He was on his belly, the meat clutched underneath him; he reached his boot to find the ladder. I recall Hamelton moved his head impatiently as Matlock toed the air, trying to find the rung. Suddenly, Matlock put his boot against the clock and pushed, then pushed again, and lazily it spilled over the ledge
and hung a moment, ticking; had I thought
of where it stood I would have thrown myself
beneath it. But I was still returning thanks
that they would only steal. And so it fell.
It whirred and cracked, and then the chimes
began
to clash, crashing over the crib in which
my Willie lay. There was a silence,
deathly still. I couldn't speak. I only saw
his little hand was flexing, underneath.

6-I ran and ripped the heavy clockworks off,
the chimes and walnut case, the splintered rails.
His head was gashed, his eyes were open,
and they were turned up white. I held him tight
against me, stanching up the flow of blood
in fancy work. Murders, I said, and then
again, murderers, and then I shouted
murderers, rocking my Willie, murderers.
I screamed as loud as they could hear, and then
again. Cordell suddenly leaped across
the room and put his gun against my head
1

saying, [Howl damn you, howl] and so I screamed
again. Hamelton lunged and took the gun
away from my temple, and I stopped.

Matlock, get down, he said. I heard the man
descend and walk outside. **Let’s get on.**  
Cordell, said Hamelton, there’s nothing here. **WARN Sound 4b**  
She’ll raise all hell, Cordell broke in. I think **WARN Lichts 17**  
and then I didn’t hear the rest, for Willie’s head was swollen so around the gash.  
I dropped the cloth in water and pressed it up against the swelling, kissing his cheeks and eyelids. After a while, they left. Willie cried and cried as I dressed his wound. I looked outside. The dust was settling, and they were gone. **End Sound 4**  
Later, as Willie slept, I sat down again.  
The sun was blinding hot, and I thought of Ol the water, gushing in stony streams of our New England, how I parched for it, and I cried . . . **Sound 5-V,1**  
**Lichts 18**
STATEMENT BY THE REVEREND
MR. B. L. READ

3-Seek, and ye shall find. Seek, as we have found.
We reap an amber plenitude beside
the honey-humming dells—Marais des Cygnes, that
flows
broad-shouldered in her banks,
breaking in shoals
and rapids near the mounds crested with rock—
hickory, walnut, hazel and pecan—
plum, persimmon—throngs of antelope and deer—
Empire in anarchy, waiting for hands
to shape it into barn and hayrick!
That May nineteenth, I was watching just
such hands as Pat Ross harnessed up a horse
for marking out a stand of corn. A smart
southwester tossed the poplar leaves on top
of Timbered Mound as Ross sank in the share.

We talked about a school, for raising two
years hence, and Pat then pointed out a stand
that we might log for siding and the floors.
It put to mind an Indian convert, old
and resolute, who watched
us cleave first furrow up on Mission ground.
He knelt and thrust his hand knuckle-deep in loam, fingerling it. Then he stood and looked at us. **Wrong side up** was all he said, before he walked away.

That tickled Pat. He laughed, throwing the reins around his shoulders, leaning back to halt and more enjoy it. **Featherheaded buck.**

*I never saw!* We laughed, and as we did the timber near the water seemed to rise at us with echoes. His horse whickered once as if amused, and as we paused for breath to laugh again, there was another—not from the water, but behind.

And then I felt a touch of cool along my back. It wasn't wind.

I turned and saw Hamelton topping the pass on Timbered Mound.

He heeled his sixteen hands of stallion down the trail, followed by what looked to be a score of riders, and three on foot. **Read!** he cried, reining, drawing off his gauntlet gloves.
Revertv, now this I count
a happy accident. Who's your friend?
A Christian, I replied.
Hamelton smiled. He drew and cocked his Colt.
The others had surrounded us. I saw
Johnny Campbell, Andrews, and Wing, on foot
behind. Brockett! Hamelton called. The one
who ran the Southern Hotel
pulled his handsome bay around and looked at us.

1-Denton’s killer, whispered Pat, and then he spit.
Brockett looked at us with eyes that seemed
to limn some thought. Bible-runners both, he said.
Hamelton ordered us to fall in line.
He trimmed his aim: You won’t will you? I said
we willingly would do anything right.
Where we’re going, we’ll need
a minister, he said. One of his men
whose neck was split with scar got down to free
Pat’s horse and another, working on a chew,
said, That’s a damned good horse there Sheek. I’d
take
me a piece of that. Pat started for him,
shouting, Thieving Bushwhackers! but Brockett
interposed his bay. Stay, he said; Pat stayed.
Then William Stillwell happened atop the pass; he braked his wagon, trying to turn, but soon they brought him down. Young he was, and dressed in Quaker gray. Where the hell do you live? one demanded. Friend, at Sugar Mound
he said. He looks like one of Jimmy's men, another said, so Stillwell was put in line. One of the Raiders called for riding on to Fort Montgomery. No, said Hamelton. Bring up those older ones. Andrews and Wing came up, looked at us, then him. I reckon you would rather walk this wagon back than go with us. We've got younger scalps to fry.
They got aboard as Sheek unhitched the team. That left Johnny Campbell and the three of us. We marched along a wash and crossed a stream. Some of the Raiders said they hadn't ought to let the old men go but Hamelton cut them off: We had enough
doggerel back at Nickells. Besides, he said, we've got railroad men and turncoats up ahead.
I cried: Hamelton, the Lord hath said—
thee I make a terror to thyself and all
thy friends. He didn't seem to hear, but held
his florid, handsome head
erect. What parasite sucked at his thought?
The slavery laws? That cause
was lost. Stealing horses? Montgomery's men?
If they were evening up, why not attack
the fort at Sugar Mound? . . . I could not fathom
them,
nor was I afraid: their desperation showed
no doctrine. It was clear
that we had cut the colter out of slavery
once for all in Kansas. It gave me great
confidence to sense that truth, feeling the firm
Semitic muscle in our Master's tongue
that made him prophesy For I have come
not to bring you peace, but a sword. We had
carved
with steel the Free State Kingdom of His Will.

3-We headed East, only a mile from where
Missouri lay in wait. The sun rode high
and hot and seemed to draw our blood around
its element. Grasshoppers leaped against
the horses' flanks. Friend, Stillwell whispered, there's a hundred dollars in my boot. Don't favor it, I said; they'll not perceive. He shook his head, To think my wife had warned me. Young Campbell came up beside; his shirt was bloodied. They didn't get the Sharps' he whispered, just some robes. Sufficient then unto this day the evil, I replied.

At Hall's they took old Amos from his bed in fever, stood him in line, and Stillwell caught his arm. We walked on East, slower, they more wary as we cut across the grass apron that fell from Hay Rick Mound. Ahead lay William Colpetzer's claim. We could hear his wife haranguing him to hide. Down! I will not run! the Dutchman roared, so he was also taken. We struck off North.

[The word is out] Colpetzer shook his fist,
[and Coting Hommelton will soon be dotching shot]

Hamelton laughed. You mean Montgomery's

man? They're gone. There's not an Abolitionist for leagues; they're up at Sugar Mound. So let your Jim Montgomery sleep, craving his fame, without the cute a coyote has to get it. I wouldn't waste the shot on such as him.
There was a bluish serpentine of smoke
rose from a cabin in a walnut copse
with piled-stone walls before and either side.
One of the Raiders spoke to Hamelton.
Go get him, Griffith, Hamelton said.
The other, small, with hob-heeled Texas boots,
took a pair of men along. They dropped behind
the wall as Griffith walked without a show
of hesitation in the door. For one
moment we only heard the wind skimmer
the bunch grass, waiting for the shout or shot.
Suddenly, two men walked outside, their hands
above, still in plowing clothes. No one knew them.
That was quick, said Hamelton.
You're Hamelton? said one, angry. Hamelton
nodded. Damn it, we don't even know
Montgomery. This man here's a guest of mine
from Illinois. Hamelton asked his name.
Charles Snider, the other said. Illinois!
roared Hamelton. Damn Illinois! You're kin
to Dutch Eli up at Priestly Mound
and he's our game, by God he is! Hubbard,
go and get their arms . . . And so we started off
again. Dutch Eli? said the one, who's
that? The other shook his head. Oh God,
he said, how was I to know that he was looking for that name. And then the thought struck out at me: Hamelton has a list. He's not just raising hell, he has a list. And there are other names than ours. And what would be the end? And then I closed my eyes a moment, breathing in; perhaps Hamelton heard whispers from a Self we hadn't seen.

Amos Hall commenced to ask for drink.

Hamelton, I said, you could at least give of a draught. Brockett pulled a flask out of his dickey bag. He threw it down to Hall and said, The rest of you can wait; get it in hell with Reverty. Then Sheek whispered to Hamelton; the Captain's face mottled with excitement. We began to walk, not aimless or tentative, but now as if a groove guided our steps. The next we took were William Hairgrove and his boy.

Join the Brotherhood, said Hamelton.

Hairgrove looked him over: Why?

I know the way you vote, Hamelton said.

Hairgrove kicked the dirt. The hell you do.

I'll show you how, said Hamelton, you wait and soon by God you'll see... A kind of stiff
You'll see, precision took a hold of him... he kept repeating. My boy ain't part of it, said Hairgrove; leave him out. Hamelton cropped his horse and hissed, Nits grow into lice.

Brockett tried to intervene, but Hamelton cut him off. The spawn goes with the stud, he said, and next is Snyder. They fell in line with us, silent, and we walked toward Priestly Mound.

Soon we heard the squeal of cart wheels, and a yoke of oxen hove over the slope. Austin Hall, half-blind with erysipelas, downed the mound and dropped into the waiting web.
VI

THE MARRIAGE OF LILY STILLWELL

5-Her kitchen is a moundslope, sinking down to sycamores on Sugar Creek; behind and either side rise prairie mounds as bald and smooth as muffins in a tin. She stoops before an open fire, trying to shield it with her bonnet. The southwest wind blows hard enough to lean against, and throws up piffles of dust against the covered pan she used to raise salt yeast. She has laid a line of chips behind the oven, and built up stones around to keep chips, coals and pan from blowing off. The flames rear up. She casts her bonnet down impatiently and squats, her skirts ballooning, trying to damp the fire.

6-Never a cloud today, never a mercy from the sun. Her kitchen-fancy teases: vague imaginings of drawers, the sharp report a stoveslot makes, the reaching out to grasp a cool and sweating handle of a pump. What Canaan land is this? she asks herself, feeling within
a surge of dark dimensions, then its ebb. She banks the coals and glances at their ox, horned, half-wild, tethered with a hawser.

And thinks, The Territorial Road was best. William, thee'd not abide my words but said to save a league cross-country valued more than any Kansas Marshal's ridealong, and when thee set thy mind, nothing availed. Peace and probity are principles nor Friend nor Christian denies, but where is peace

if probity must mean to gainsay me a certainty of mind by riding off to Westport all alone?

She turns and looks inside the water jug, then hefts it on her hip and pours a cup.

5-Silence. It is a skirring, slinking kind of silence. At night, beneath the lean-to, she hears a sound she thinks is made by stars wheeling all bright and brittle overhead. And just two months, she thinks.
Two months since stepping down the scrollwork iron platform from the car at Westport Landing. And William, still in plain dress gray. Dear heart, my own delight.

He was thinner, and there was something brown and hard about him pitching her stagecoach trunk behind the buckboard. Then he swung her up the step and sat her down.

And they were married in a kitchen.

No Philadelphia Meetinghouse, he joked, but whose are truer vows than ours? He hired a minister named Read, and bade two Friends named James and Lucy Marshall presence too and they had spread the sink and stovetop thick with flowers. How her head had turned with smells that day at Trading Post; of honeysuckle, sweet verbena, wild rose, saddle leather, whiskey. With the tramp of boots and chinking rowels and faces long removed from soap and barbers, it was Babylon.

But in the moment of her vow, she felt a kind of Lightslide of the Truth, within.
6—And then they brought the fiddlers, harp, and jug and planktop tables. She had barely got
the pound cake cut when Read removed himself, whispering to William. Others went out, and only then she saw their guns. She sensed how closemouthed William had become: she had to ask, and ask again, till he at last confessed he ought to ride to Sugar Mound. And then she had to plead that he would not, and he looked black, obviously torn. So then they compromised and both drove off, leaving the trunk, the flowers, the women, and the cake.

At Fort Montgomery, they passed guerrilla columns off to raid Fort Scott. A piece beyond, the slave named Winnie Campbell sat inside a sod-roofed smokehouse, suckling her child. Lily could see how used she was to portering her loads atop her head: even in grief, her backbone held her face erect and proud. A blacksnake stripe cut across her shoulder, fresh-swelling and pink.
Lily drinks her water, thinking how it looked easy in her dimity to bear that load yet knows it is the bite of whip and wheel of suffering's own momentum that sustain the slave: so caught within the press, he yields and stocks his own arms taut for breaking. Easy, yes she thinks but only looked to be. Inside, a slave knows nothing but his death. That day at Sugar Mound, she and William heard how it began, to South along the Red in Arkansas; how two converts to William Garrison gave Winnie all the rights they could, setting her "free"; how Winnie married with a slave, Lewis, and bore their child. But then the law required Master-guardians for Freedmen—to comply meant chatteldom, to refuse, the auction block.

Winnie began to hear about a trail that led beyond Fort Smith, beyond Fort Scott, out to an open prairie kind of place. It was for twilight telling, what she heard, ankle-deep in dust at cabin doors when fires were lizard eyes:
exodus tales about a freedom road.
Lewis encouraged her to take the chance
and he would follow. She strapped the baby flat
against her back, with corn meal and chitterlings,
shallots and pecans and grapes and plums.
The trail unwound a half a thousand miles
across the mountains of the Ouachita.
She was tracked by slaving Indians in bands
whose sentinels she learned to read in dust;
hewed shelter from the chinkapin, hearing
the pish and whing of arrows in her wake.
Then it was white men in their bands who looked
for runaways; and descending from the blue
Ozark hills to a gulfstream surf of grass
that sighed and broke in continental winds
she ran with shrill piping of ball and buckshot
close at hand. But now at doors that opened
into food she heard of Free State Kansas,
and ninety days from Arkansas she crawled
up to Fort Montgomery's palisades
from Sugar Creek and saw its puncheons open.
Montgomery led her in and said Woman,
I pledge my word this fort will keep you free.

5-And James Montgomery's word held true. That
year
she lived in peace, but waiting, always waiting. Buffalo came and went, the soldiers drilled.
Clarinda gave her washing and the water walk. And then one night in June the woods loosed a man dragging an iron shackle—it was Lewis, wounded by shot, but safe.
Eli Snyder came to strike him free of chains and set him up to farm, but in the fall the Territorial Marshal left Fort Scott and late one night his posse rode in hard and ringed their place. Lewis Campbell, he called.

_Surrender to the United States._ And then they stormed the smokehouse dragging Lewis out and tying him astride a mule. A man whose neck was split with scar called for _taking in the wench_ and riding on to Fort Montgomery, but the Marshal told him short. The warrant reads that he's the slave he said. _She's free; so is the whelp._ And then the man sawed on his reins and dug his spurs crying _She's chattel too by God_ and cut her with his whip. And then they left, and when the morning came, Lewis was back in chains...

...The fire that Lily tends is steady now. The sun reels in a white and depthless sky. She puts her bonnet on, then walks and sits under the lean-to, in the shade. _And so for that one African they rode_, she thinks
remembering how she had to plead again
with William not to ride: To what thee does
tomorrow I can not object, but this
is wedding day for me, breaking into tears...

5-Remembering how he turned the wagon back;
and she, watching the sun descending proud
and angry as a fireball in the banks
of clouds, hesitant to hold his arm,
still silent in the cricket-chorusings;
and then the drum of hoofbeats in the dusk,
how William cut the wagon from the road
dropping into the brush and pulling her
beside, and drawing from the box beneath
the seat a rifle, sighting now along
the road as horse and rider cantered like
some rusty pendulum in range, and then
her half-cry as William challenged Stop
or I shoot thee, the rider lying low
and spurring. Then he fired: three times he shot,
shot with a carnal instrument, to kill.
And how she thanked Providence that the balls
went wide, thanked with tears that meant both
shame

and something else—she might have called it joy,
or maybe terror. But never love.
Next day, she heard James Marshall was the man, coming to ride them home from Sugar Mound . . . 

. . . Lily lays her head across her arm.

William, thee is not for violence, she thinks yet feels a numbness in her limbs. A sense of strangeness presses in around her like the dry insistent beating of a locust's wings. The wind rises and the longhorn ox bellows, hoarse as a rifle volley.
They ride in Legion now, six sixes deep, legging like a spider up the slope of Priestly Mound. Behind, along a white limestone collarbone of creek, the brown span of oxen cut from Austin Hall graze haunch by jowl in greenstream grass.

Hamelton drives the phalanx needle north and up to timber, where they rein along a line of stumps below the chine. The Captain lays a leg across his pommel, watching smoke thumb up from somewhere on the other side. Then he pulls his two-edged border knife, taps the star-shaped rowel on his boot, and signs for Brockett, Sheek, and Griffith to dismount.

The blacksmith draws his bellows like a pair of shears, snicking the air in wedges which he feeds in rapid fire through a hood. Their rasps commence to anger up his mound of charcoal to a white ordeal for iron. He takes a candent bar, throws it against the anvil.
beats until a crescent waxes red.
then dunks it in a puncheon brim to brimful
foaming with white artesian watersprings.

Behind a fan of tamarack, they lay
their eyeshot on the roof of Snyder's forge;
half a moundslide down, it turns
its face beyond, southwest along a snake
ravine that headlongs from the door, through elm,
poplar, a lone red haw, down to the green
meanders of the Cygnes. Behind and sides
the walls are limestone-blank. Griffith sets
his pantslegs down to hide
his boots. With gun and knife behind, he drops,
circles the shop. Brockett and Sheek remain.
Hamelton trails him down, his shotgun primed.

The square-jawed maul beats bell-like, and the
hand
and arm and crosspiece fall in cadence
to its calling. His arms and shoulders rise
cut of a steerhide shield or apron like
a burst of copperheads
writhing around the black and hairy roots
of river sallows.

Eighteen leg-irons hang behind his forge.

Each clevis-pin is severed by the sharp and burrless cut his hammer-arm has dealt.

each testifies to Truth rung deep in bone:

one arm, one steel, that sprung

a sound of southheel slaves to life again.

4. Griffith stands before the shopdoor. He holds both hands visible and still. In the dark within, Snyder looms like a mesa, his maul motionless, poised. The sun of two o'clock is hot and slick, pinpointed in his eyes.

Be you Mr. Snyder? Griffith asks.

The maul descends once more and sparks whorl up. That's me a voice replies.

There's a man out yonder wants to see you Griffith says. The blacksmith lays his maul and tongs aside and turns to rinse his hands. All right.

And he will come: Griffith sees it, now.

It is as if the doorway were a chute;

he is the wrangler, Snyder is his meat.
He has anticipated this. Not the man.
the stranger standing with his gunhands poised;
but the call, the innocent request.
He too equivocates, nods his assent.
He lays his tongs athwart the charcoal while
he rashes, takes them then, inconspicuous.
as if they were the watchfob to his hand:
blinks as his head emerges into sun.
engaging then the stranger's steady gaze.
saying, [Where?] while slipping back his hand
behind the cedar doorframe where a Sharps'
six-sided barrel meets the palm. He waits
a second as the stranger steps ahead
to lead him up, follows in the pinheeled tracks
a step behind. [Up here] the stranger says
just as they round the wall.
It is Hamelton, half a dozen yards
uphill. [I've got you where I want you]
calls the Captain, his coatarms black with sweat.
[Yes? You think you do] the blacksmith shouts
and feels his right arm rising with the tongs.

The blacksmith towers like a timberline,
eyes and mouth inhumed behind his grizzled
beard. Hamelton feels his finger jump
against the dogstooth curve
of forward trigger, thinking. There is such
goddamn lot of target
to him, to the limbs that seem to drop
like taproots from that trunk. Griffith yells
You damn well know we've got you Eli—march!
and Hamelton calls This way! when then
the treestump splits as if
a bolt of lightning ran it through. For two
splitsecond seconds, Hamelton stands
hung on his tonguehold, and he sees a tongs
lash out and rip across Will Griffith's face,
hearing the scream of pain, seeing him then
begin to fall as Snyder's second limb
lashes the tongs again, and then again.

2-He turns to jump behind his wall and grab
the Sharps; feels himself turned again in turn
apron-to on Hamelton who fires a charge,
and feels the steerhide kick against his ribs,
the sting of buckshot laced with pepperpods
that sear beneath his skin.
Passing the corner now, the whing of shot
rides high and easy over. At the door,
he grabs the bluesteel barrel of the Sharps,
then drives the stud-iron door in place and bars
it shut. He legs across the room and stands
aton his bench, pulling a loosened stone
out of the topmost course. He sees the Raiders
still in range as Hamelton circles out
to run the door. Hoisting the Sharps, he feels
a ground glass bobbing back and forth within.
He sights along the Captain's pewter buttons,
fires. The rifle leaps and churns against him.
Damn! he roars, half in pain, half for the gray
flag of coattail that snaps and dives behind
a rock. He leans the Sharps against the wall
and loads. A pistol ball splatters across
the wall below. Now he can see a rifle
barrel glinting like a needle in the green
of tamarack along the ridge. He fires
again and roars Get up ye goddamned
blackheeled bastards feeling his muscles close
around the shot the way an oyster grows
around its stone until it smoothes to pearl.

3-There is a sow bug of a curse that squats
upon him now: Hamelton feels it suck
his hot sun blood, raging the while to shoot
the blacksmith through, to watch the plenum bile
spill out and dissipate, to crush the skull
and arch-coils of the Abolitionist.
He sights along the rockface at the hole
where Snyder's rifle winks: he fires again and hears the rockchips spall in rattles. He conjures: succeeds only in summoning up the Snyder he has met six weeks before crooking a Sharpe across his arm. That looks just like a rifle, Hamelton had said; you'd better treat it careful if you go on past Trading Post. At that, the blacksmith turned his gaze, and he could see the blackash eyes that once him up and down. If you know better Snyder said then why even ask? Hamelton had felt a kind of organ bellows pulsing in the air: black, rebellious Northern blood, that would have been at Black Jack and Osawatomie. The Captain thought to burn him then and there. Keep the Sharps at home he said or else I'll blow you through. The blacksmith raised his gun as smooth and quick as oil. If you don't leave I'll take you off that horse. He takes his Colt and fires it at the window, yelling now to Sheek and Brockett for a covering fire. Resting his shotgun in the shade of rock he sees a salamander shake its tail
and scrabble back and forth across a ledge, back and forth, ruby-eyed and insolent.

- The shots spat wide around his rifle port.
  Fragments of ball and stone tear at the hide he wears. Now he hears their words, rising like black expectant carrion birds: he moves his hand as if to brush a dross of spiderweb away, and smiles. It is foregone, he thinks. Let Hamelton rage. Let him peel his hide.
  He loads and fires. His Sharps can speak three words for every Southern syllable of shot.
  Now they are firing from the hilltop, hot for Hamelton's retreat. He pauses. Then the Captain makes his dash, and Snyder shoots again, almost reflectively, along the row of buttons: sees him crack his stride and fall loose-legged in a bush. Silence.
  He loads, and hears a sound of voices near the door. He knows that they will be a party taking up the man. On the slope, Hamelton rears, running out of range. He lays the Sharps aside and slips down slowly from the bench, leaning his arm beneath the waterflow.
above the puncheon; lets the current pour
across his arm and shoulder, spinning the clot
to chips and coils and bloody filaments.
He sees his blood oiling the surface
of his tank, beneath the hanging irons;
it spills out of the puncheon now, spills
beneath the wall, spills into the long ravine.
down to the green meanders of the Cygnes.
THE MASSACRE

3 - Spraddle-legging through thistle and dry dissilient milkweed pods. The bunch grass boiling up beneath his boots in humps, splaying like surf along a shore. Cursing himself, the rumpling rifle balls, the slickleaved shade cover thrown by osage oranges in plats along the slope. Cursing the curse, the black boa coils of happenstance, and the man unseen, erect behind the blank stone wall.

He dives beneath a bush, feeling a warm purling of air behind a ball, and thrusts his head and shoulders underneath a vine. Crowfoot. It is a leafy, bitter smell, rooting in blindworm runners down to dark.

A saskneed cricket chirrs into his ear. He thinks God damn. You goddamned fool.

Snyder pinked you good. The sun is slipping down its rim into the flange of hills. Twelve, he'd wanted. Twelve for him to kangaroo.

You lost him. A vial of leadheaviness spills into his blood.

He makes himself resist, biting the lining
of his mouth. Gonna write it on the wall.  

he thinks; write it big, write it in blood.

4. The nib of powderhorn gouges his side.  
   the pouch of shot, the shotgun, dry and hot.  
   He feels a vapor tracking up his arm.  
   rolling the blood; now his shoulder, neck  
   start like a flickertail. It infiltrates  
   his body corridors, undoing hasps,  
   firing the puncheons of his brain. They fall  
   and all the feeding flames within shoot high,  
   whipped by the windmill arms  
   of prairie wind, swatching in sheets across  
   the sky, detonating groves of sycamores,  
   birling the horn-locked herds of buffalo.

And feels a thought he does not think; can feel  
his head rise up, feels all himself plucked up,  
the tendons of his legs snapping against  
the bones, raising the shell of vines until  
his arms and backbone burst  
out of the overgrowth, and he is free.  
He hears no shooting, now.
He runs along the slope, ramming a set
of charges home. Brockett! His badger's face
flinches in surprise. Get the goddamned horses!
Griffith's bad the other says. Dammit Scott
get yourself a move on!
bracing in the saddle and turning back.

And rides them down: the Abolitionists
hold their faces half a breath removed
from fear. Even his Raiders seem to wait,
unhoping what comes next. He can discern
the worm in all of them, looking across
to shade, where Griffith holds his tong-raked face.
Talk has never been
equivalent to commands. The Captain looks
at Luke and William Yealock, squat on mules
and blank as bassets; at Michael Hubbard,
robes and a bottle tied across his saddle.
Matlock balances boots, hung by a knot
athwart his shoulder. Brockett and Cordell
repose in shade, letting their horses graze.

Ready, Captain. It is Sheek. In his bone
and onyx eye, Hamelton perceives
something he knows. Something he has seen, not yet, yet there. Knowing. He knows. As well as he. By God we'll write it big, he thinks, and calls: Fall in! The faces stare as though they hadn't heard. Matlock! Brockett! Sheek! Git to sitting! riding his stallion in amongst the Abolitionists, shouldering hard until they give or sprawl. Belial! the old missionary shouts. Moloch! The stallion

knee's him down. Git! And they form, and file slowly across the moundcrest toward a slope fevered with sumac. Hamelton rides around the column, shoves the straggling Halls. kicks at the Yealock mules.

Only Sheek has seemed to comprehend Hamelton's intent, riding herd in front.

He drives them up the slope to where a dark declivity begins in yarrow. Now.

Hamelton spurs. It is as clear as glass.

It is the avenue. For them. For him.

He plunges in the mouth of the ravine, trampling the brush. March in here! he shouts.

And they turn, with Sheek beside tamping them through the orifice. Hamelton turns to watch them coming in.
3-the first is Robertson, red enough
to boil. Snyder is next, Eli's kin.
and Read, swelling with belly rumbles.
Ross, the Irishman, smiles with half a mouth.
The Quaker walks behind,
staring stones to life, and limping. Amos Hall.
And rear, the pimply Hairgrove boy, who walks
eyes closed, father behind, looking back
and swearing now. The blinded Hall who holds
the Dutchman's arm. And last, the little clerk
and rilefmonser Campbell, leading up
the rear, edging between the narrow arms.

The Captain leads them down along a choked
descent that jaws them to a single file.
Here the sumac cools to cottonwoods,
the ground is smooth, grassy as a road.

2-[Halt!] They stop. [Face right] He smiles, feeling
pleased.

2-[You tell them pick, they pick.
Up along the walls, he tells the Raiders:
they ride on either side of the ravine
to eastern-high above the line of men.

2-[We're going to see what Abolitionists
have got for guts, the Captain says. Montgomery,
Brown, and all your men will have to look
3. He calls, reaching for his shotgun. Gentlemen, he hears, if you intend to shoot, then take
good aim. It is Hairgrove, drawing now,
mocking his very tone of voice; he spits
neatly between the hooves of Hamelton's horse.
Fire! is in his mouth to say, when he hears
Brockett don't obey. It is Sheek, who points
along the line to where the bay and rider
stand. [You raise your piece!] the Captain cries.
I'll be God damned if I will! I'll fight,
but I won't butcher! Brockett turns his horse.

End Sound 5

Sound 6

He rises in his stirrups, voice and arm
and fist flopping against the flow of air
along the grass ravine: [Remember Scott
and all the rest of you, your names are down
on Jim Montgomery's list. Screw me now or not,
they are. And my first charge is primed to fire.
Heist your asses now and see; anyone
not in line and firing gets the second!]

a month to find your pieces. Raise your arms!}
J. Brockett swings his horse around and pulls his shotgun from its scabbard. Will Yealock points a rifle, Luke a Colt. ['Present your arms!']

Now they all are up. And the Captain sets his sight to where the ramping sun has rolled:

by raising up his hand
he can contrive to turn the iron valves of sky
and tap the utter shales beyond, to flood the vaults of heaven with diluvium.
to ride upon the baulks of earth, the winds beating around these molehill mounds, and swamp the fires of all of them, drown them all with one thunderstone of Force, sinking the sun, the mazing corridors of space: his arm cocked like a Cheyenne bull-roarer against the falling sky, hingeman to the helm of history, joint to them all, the rack millennial since Cain, who watch from files beyond the skyfolds he is flooding down.

[Write it in blood.] And brings his right arm down, his Fire! and roar of shotgun bounding back, doubled again on down the line, his aim centered on Campbell's belly, as the line breaks, splitting and plunging, with aftercry and murmur of surprise and lasting sprawl . . . Sound 6a-7

End Sound 6 Sound 6a

Sound 6a-7
He is off and standing now, feeling a warm gloving on his fingers, of blood that spills slow as honey from Campbell's side. A shout pulls up his glance along the rise. Brockett turns his horse and runs. The Yealocks follow suit. Hubbard looks around; he sees but does not seem to care. They're not all dead the Captain says. Let's finish them. Sheek bends down beside a body holding its dead belly like it ached. There's old Read says Sheek. And which is he? There's the old bastard looking up. Put the pistol to his ear, the Captain says, shoot him into his ear. Turn the Quaker's pockets out, says Hubbard; I heard him say a hundred dollars. Here's his watch and fob ...

A crow caws from a pocketfold of tree.

No one ever wrote it bigger. Abol,
melting along the bunchgrass floor in slick, uncertain rubrics. Prairie spatterdock,
crimson, weeding down to limestone springs ...

A wind rises along the grass ravine.
The Quaker holds a green and yellow flower burst from the house his bellymuscles built ...

He is alone. Sheek has ridden down the mound. He is clean. He is clear. He lifts his boot, then heels into the stirrup. Behind, the track of hooves, his footprint. He turns, descending. His horse, the bodies, and their dark vital lava, convolve in shadowfall.

4- He is off and standing now, feeling a warm gloving on his fingers, of blood that spills slow as honey from Campbell's side. A shout pulls up his glance along the rise. Brockett turns his horse and runs. The Yealocks follow suit. Hubbard looks around; he sees but does not seem to care. They're not all dead the Captain says. Let's finish them. Sheek bends down beside a body holding its dead belly like it ached. There's old Read says Sheek. And which is he? There's the old bastard looking up. Put the pistol to his ear, the Captain says, shoot him into his ear. Turn the Quaker's pockets out, says Hubbard; I heard him say a hundred dollars. Here's his watch and fob ...

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They came from Farlinville, Paris, La Cygne, their wagons slow as land snails, the wheels squealing as they climbed a hump of bunchgrass and then hammered down the dip. A troop of horse wound its way cross-country. Others walked with bedrolls on their backs along the slope of Sugar Mound. The day was windless, clear. The prairie year was closing up its eye on bluestem dunned to straw, on yarrow bolls, on panicle and leaf of sumac afire in clumps among the oaks at Barnes's store; on beaver, blue, and brass of state militia and spiderwork of frame and courthouse brick rising from a foursquare green beyond where William Hairgrove sat on a plank, his gray eyes surmising who and why they came.


He stood, straightening his back,
and looked around the square—at Colpetzer's wife, Amos Hall, and all
the ones he didn't know, or only thought he knew; and some in uniform or bits
of Blue, and women, now, more now than then

when Hamelton had sown his bloody oats
broadcast across the mounds at Trading Post...
... and all the ones not there to see: his son,
drafted to infantry; Montgomery, Colonel
to Colored Carolina Troops; Brown,
a martyr in Virginia; and the Five
faces, dearer for rubbing down in time
to likelessness, like stone, never to rise
to hand or voice again:
Johnny Campbell, Stillwell, Patrick Ross,
all shot and knifed; Colpetzer, wrathless now,
and Robertson, a man they never knew;

and Six still bound to life—the Hairgroves, Snider,
Read, all freighting shot, Amos Hall
who'd spat out ball and cartilage from where
they'd drilled his cheeks, and Austin Hall who heard
the skirr of death and fell
woundless, his eyes pussing like punctured boils, and afterwards had felt the warm worming of the air that slid along the grasstops, and worse, over the pain, had sensed his soul squeezing against the cold bodystones fallen from their firmament until some Providence keyed them in their bleeding arch again...
Hairgrove thought, *It is the day come round at last,*

and yet the Jeremiah joy was gone.

The justice of the state was like a page
of algebra that ciphered to an x.

But there had been a day five years before
when Eli Snyder sat in the Trading Shack
and malleted his words at a New York
journalist, swearing in evenhanded
strokes to kill Charles Hamelton forthwith.

Hairgrove had felt each one: they drove so hard,
harder than the rifle balls he'd borne
within his breast. *I'll kill Hamelton*

—three words that raised the blacksmith to his feet,
folding his leather apron round the arm
in bandages. He turned to add, *I give
my place to Brown,* walked out,
strung his mare, and headed for Missouri.

To pull Missouri topknot down until
he'd made his rendezvous with Hamelton,
riding into the hearsay air as straight
and black as a walnut bole, leaving them all . . .

. . . Deepwoods they rode, to where two uprights
stood

eight feet apart and ten in height, a beam
between, from which an iron pulley hung.
The noose-rope fed around
it, then along the upright where it tied
around a quarter ton
of anvils in a box, fastened beside.
Get yourself yielded, Griffith the Sheriff said,
rope up his hands. The Texan raised
his head, the beard grown gray around a web
of scar across his cheek.
By order of the District Court ... the Sheriff
started. Hairgrove heard him halt, then start again
and read it through. He turned to place the hood.
Hairgrove dismounted, shed his moleskin coat.
He's yours, the Sheriff said, handing him the axe.
The old man ran his thumb along its face
feeling its callus rasp against the edge.

He walked between the prisoner and the box
of anvils, taking a stance beyond
the plumb of their exchange. He raised
the axe, judging the arc. He thought And now
to strike: Griffith stood without a sound,
hooded, anonymous.
His shadow lengthened, seemed to stretch its arm.
Hairgrove caught wind of smoke, spicy as a flitch
of bacon on a beam—even now
when pots of beans sent up their thick, mealy steam to turn a man and team knee-bent from breaking sod toward home, just as in that hour five years before, so now, as that desire for food seized the belly, Hairgrove swung the axe. It soared like a steel and mallard messenger that slit the eye and flanks of sky before it buried to the bit, and hellbound sent the anvils with the man.

There was a catching kind of breath that came out of the crowd. One of the militia fell. Hairgrove laid the axe aside. He let the Sheriff help him with his coat. He turned.

I thank you, Hairgrove said, bending down to reach the axe. Keep it, the Sheriff said, it's yours. Hairgrove held the slate-eye in his hand.

There was a grainy nick along one side.

All right, he said, I will. He tied it flat against his rifle scabbard; then he mounted and rode through the knots of crowd for home.

But it was not the same, the old man knew.

Something about the crowd. The likes of troops.

That the sweep of mare's tails in the sky and buffalo like clumps of scrub oak.
had given way to plumb bobs and the rule of sums. Who would remember otherwise—that two posts and a crossbeam took a roof of wattles just as well as rope. And how you cut your first timber on your claim and laid it in a brake. And no man ever hewed a two-day chinkapin like yours nor raised such notch-end beams. Only the man who gives himself whole-hide to land can know how absolute it is to own. Or lose. And it is ours, he thought. He stopped, remembering now the skulking, the night calling at doors and shotgun greetings there, and when they all were forced to flee to Fort Montgomery, rolling themselves in blankets, sleeping in lines of six across the common bed, and then at dawn Clarinda boiled a block of mush, and they had talked the clock around, about the slavers, courts, their hopes for Federal redress, when then a form rose out of the corner of that bed, its white beard sweeping the burry homespun, and stood and raked the air like grapeshot with its words, driving them back to where all thought began steel-engraving them with what slaving men would do who lusted after ownership of others, how they shot his son, and now
would take the saber to them all. They would, and would again, a hundred hundredfold... End Sound 9

Sound 10

Names like fading rockprints
of a bear that turned from the watersprings and climbed along the slopes beneath his lair knuckling slowly erect until he stood looking back across the timbered mounds, rubbed his back against a haw, and disappeared.

They're gone, the old man thought. He looked along the moundslope, past the woods. A southwest wind was rising, pulling the viking maple leaves like boats amongst the air. Distant, he could see the sinews of their river, with her banks greenshouldered still. I guess we all become just names; he thought. Hairgrove. He took its taste.

Marais des Cygnes. The thronging waters and the clanging fowl. Trading Post. A heelhard floor of beans and barter. Then let it be, he-thought. Better that every generation lose its name, to find it for some truth!

What did they say; an Indian girl once sat along those banks, sifting the sands of day
to sand, waiting for her Cheyenne chief
to come and set her wild-plum heart aflame
and died with each day's attrition till she drowned
deep in the darkening water, and then
in the spume of breaking wave, its hiss and crack,
the two great swans emerged and slowly spread
their wings, gaining the air. That was the myth.

[And now the land was ready once again.]
[It was the time. And it was time for them.]
APPENDIX C

Music Score

Music Score Key:

Cue numbers are the Arabic numbers circled on each page.

Music symbols used:

\[ \begin{array}{l}
| \quad 2 \quad | \quad \text{- repeat preceding two measures} \\
| \quad \frac{\text{\textdegree}}{\text{\textdegree}} \quad | \quad \text{- repeat first rhythmic figure on each succeeding count} \\
\text{Y.S.} & \quad \text{- turn page quickly} \\
\downarrow & \quad \text{- add octave below note indicated, when stem goes below note}
\end{array} \]

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Overture to "A West Wind Piece"

Tempo

J. S. Bach
Section I

Intro.

Slow

Bo - Bo - Bo - Bo - Bo - Bo - Bo - Bo - Bo - Bo

(cut as needed)

Interlude

Rit.

Slow

Journalist:

Peace Man

Interlude
Silence for: "By fall of 1856, Missourians made their play."

[Signature]
[Piano Touch] Share Drum 17:2

\[ \text{repeat till: his ear burns,} \]

then: SILENCE to end of \( 2a \).

SILENCE

\[ \text{Slow 2} \]

\[ \text{back our claims - dignity, then SILENCE till } 5 \]

Moderately Slow

\[ \text{stop; after: } \]

Repeat as necessary
SILENCE for: Truth cannot be bought — better, send us Clarke.

Slight pause 3 counts
1) Shawna Drum

\[ \text{Intro} \]

Silence to end - the Saul + Jonathan of latter day.

OSTINATO To \( \bullet \)

\[ \text{SECTION III} \]

Wait 1st set of 1st

\( \text{pp} \) (Use soft pedal)

\[ \text{Repeat to end of III} \]

(Add sequence of \( F, G, E, F, G, E \) halfway through)

\[ \text{g3a lower} \]

\[ \text{attacca} \]

STUDY:

\[ \text{pp} \]

\[ \text{mf} \]

\[ \text{pp} \]

\[ \text{g3a lower} \]
Repeat as necessary to end of 2.

"We never surely knew — — —"

SILENCE To end of 2

Moderately Slow

Draped snare drum
plus no snares
mf
gradually accel. until
and
Cue then ritard.

Postlude to
Preludes to \textit{V}

---

\textit{Slowly}

\textit{Sustain thru}:

\textit{"Seek and you shall find"!}

\textit{\textit{Coda}}

\textit{\textit{Slowly}}

\textit{\textit{(breve) Same Tempo}}

\textit{\textit{Poco rit.}}
SILENCE

"Free State Kingdoms of His Will"
Same Tempo

poco rit. 1

+ a alla coda

App no sustaining pedal! 2

repeat as necessary tend

for loud

for lower

a alla coda Postlude

Postlude to V
Prelude

Section VI

Slowly

Continue thru 2 + 3
Slow March

Poco rit.

From lower

sept. pedal

Repeat as necessary

Piano begins alone:

Slowly

Pedal

Attacca
End of V.
Section VII

Drum: Intro

Silence to Broad Street.

Slowly

Simile

Preceding

Point going
Slowly

Intro

Repeat in end of

V.S.
Sustain till sound disappears

no snares

roll to end of 4

Snare drum only (no snares)

(repeat to end)
(bis)

end of 3

"grace" use as Postlude

SILENCE To:

"Betray, the old missionary shrillest, Molech!"

Slowly
"grassy as a road"

"Halt! They stop. Face right!"

Moderately fast

very staccato

simile

Repeat as necessary increasing speed continuously

Till:

"You want to take them home?"

Then attacca (c)
Snare Drum (without snares) muffled

Tempo: 2/4

Intro

Repeat thru 6 and into 7 and stop

after: "Ton of anvil\(\)s in a box, fastened\(\) beside" (finish roll across barrite\(\) at end.)

SILENCE\(\) to end of 7

Snare Drum roll (no snares) muffled

Cresc. under last line: bellboard sent the anvil\(\)s with the man.\(\)

Then \(\)stop\(\)

SILENCE\(\) to end of 9
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THE DESIGNING AND BUILDING OF TWO LINNEBACH PROJECTORS FOR
A READERS' THEATRE PRODUCTION OF A WEST WIND RISES

by

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AN ABSTRACT OF A MASTER'S THESIS

presented to the faculty of the

Department of Speech of Kansas State

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of the requirements for the Degree of

MASTER OF ARTS

1965
The purpose of this thesis is to demonstrate the writer's knowledge of theatre practice, and his ability to use it in mounting a theatrical production.

The central problem to be solved in the thesis was the design and building of two Linnebach projectors and slides. A search was conducted for possible new lamp sources that could be used for the projectors. Projector housings were designed and built to utilize a new lamp in a production situation. Slides were made for the new projectors, and were painted for the production.

The results of the research conducted and the work done on the Linnebach projectors can best be stated in terms of conclusions reached by the writer concerning lamp sources, the projector housing, and the slides. The 1000 watt Sylvania quartz iodine lamp was chosen for the project because of its physical and economic advantages over other lamps that had been previously used in Linnebach projectors. The elongated filament of the quartz lamp was its most unusual feature, and the results of experimentation with it are reported in detail. The conclusions about projector housings are summarized by these observations: a tailor-made projector is most satisfactory in performance, and least expensive to buy or build; a multiple lamp capability in a projector is relatively easy to obtain and adds great flexibility to a projector's usage; the greater the lamp maneuverability within the housing, the easier will be the placement and focusing of the instrument. Clear acetate was used for the slides because it was thought to be superior to glass, due to its greater impact strength and workability. Twenty-three plates were
used to demonstrate and help explain this project and the production.

The production that offered the opportunity to demonstrate the results of this project was a Readers' Theatre presentation of the long narrative poem, *A West Wind Rises*. The purposes of the production were three: first, to provide a laboratory for the use of the new quartz lamp and Linnebach projector; second, to demonstrate the writer's ability to apply his knowledge of theatre to the production situation; third, to provide an educational experience for the students working on it, and a cultural experience for the audience. The production is described in terms of the director's approach to the poem, directing concepts and procedures, the readers, settings, lighting, sound, a prompt script, rehearsal data, the performance, and the budget.